2. CM 6/6.

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J. M. Shute

Lecture 28th.

Antispasmodics

Spasm implies simple Contraction, we therefore add Involuntary, Violent & Inordinate to distinguish it from Natural contraction. Spasm & Convulsion signify nearly the same Thing, but if we distinguish them Spasm denotes a simple Contraction without alternate Relaxation. Convulsion means repeated Contractions and Relaxations. They are both of the same kind, they affect the same Parts, are owing to the same Causes & often change from the one to the other. We do not however consider Spasm in this limited Sense, but rank under it Spasmodic Motions of every Kind. And by Antispasmodics we mean those Medicines which take off those Motions whether they are more strictly speaking Spasms or Convulsions.

Fœtid Gums. These have been always known to be powerfull Antispasmodics. But previous to speaking of their Virtues we shall treat of the Disorders in which they have been used. Of these the chief is the

Hysteria.

This deserves a particular Attention on Account of its Frequency, its obscure Nature & Origin, its Violence and the Difficulty of distinguishing as well as of curing it. No Disorder puts on such various Appearances. It alters the Mind as well as the Body; there is scarce a

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Disorder but what it imitates & resembles & there is no Part or Function but what it affects. It is a Disorder that has been known at all Times & in all Places. We have Descriptions of it in the early Writers tho' much inferior to the Account they have left us of other Disorders. This was probably owing to Women being chiefly intrusted with the Cure of this Disorder which was supposed to originate in the Uterus & Physicians were never called in but in obstinate & desperate Cases. 'Tis but lately indeed that Physicians have formed a proper Idea of this Disease. It may be said to consist in Affections of the Nervous System & in Spasmodic convulsive Motions of the Alimentary Canal and more or less general Motions of the whole System. 'Tis more common to Women than Men & there are very few Women who at some Period or other of their Lives do not experience its Effects. It is not however confined to the Fair Sex for Men are sometimes really affected with the Hysterics which are different from the Hypochondriacis in Nature and Cure as shall be shown presently. Tho' every Woman is subject to the Hysterica yet all are not equally liable to be affected with it. It chiefly affects those of a peculiar Habit Temperament & Idiosyncrasy, who live on certain Aliment at a particular Period of Life. In some the Disorder is brought on by lighter Causes than in others & these again are more severely affected. Some are affected from the most trivial & slightest Causes & in some it is produced only from considerable Causes. Those Persons who are naturally inclined to the Hysterica & are frequently & violently affected are

generally possessed of great Sensibility & Mobility of Body & Mind; they have an exquisite sense of Pleasure & Pain; are of a lively Imagination & joyous Disposition; they are pusilanimous light & fickle; prone to various Pasions & Affections of the Mind. Those also who have peculiar Idiosyncracies when they are affected in a particular Manner from certain Odors Aliments & Tastes which are agreeable to most Persons. It attacks those of a lax, soft, tender, weak Habit of Body; of an elegant, delicate & graceful Form & those [illegible] Those who have large Arteries & Systems & are subject to copious Menstruation. Those also who are subject to Hemorrhages, who lead an idle indolent life, live high & use but little Exercise; those who are afflicted with Grief Fear & Solicitude; those also who are recovering from tedious Disorders or who have had profuse Hemorrhages or other Evacuations which debilitate the Body. This Disorder is not confined to the more delicate, it is very frequent & violent among the Vulgar & attacks Women of a strong Muscular Habit of Body. Unmarried Women, Widows & Barren Wives & those who are subject to Hemorrhages from the Uterus & labor under the Chlorosis are most subject to it. It however also attacks pregnant Women and Women of all Ages Ranks & Situations in life. It is sometimes an Hereditary Disease with some Women & even whole Families when it is owing to some Fault derived from the Parent. Women of a robust & manly Habit & a sanguineous Temperament who are prone to Affections of the Mind are seized with a convulsive

Hysteric Suffocation & are violently affected over the whole System. Those of a Phlegmatic Habit who are affected with a Chlorosis & are weak & delicate are seized with Faintings and more local & topical Affections. This Disorder most frequently occurs from the Age of Puberty to the total Cessation of the Menstrual Evacuation. It is not however confined to this Period, I have known it attack Girls of 8 or 10 Years of Age before there was the least Appearance of the Menses: It also attacks Women after the Menses have ceased even when they are 60 or 70 years old. It frequently attacks Women when the Menses are about to cease altogether, likewise pregnant & lying in Women, particularly after difficult Labors.

The occasional Causes in Persons who are predisposed are as numerous as they are numerous. Sudden & violent Emotions of the Mind & Mental Affections in general. Of these none are more apt to produce the Disorder, than violent Anger, great Terror or sudden Consternation; Objects horrible to the Eyes; the Sight of a Person in an Hysteric Fit, an unexpected Messenger of sorrowful Tidings; the improper Relation of dreadful & unforseen Accidents; the Recollection of former violent Emotions, nay even frightful Dreams have sometimes brought on this Disease. Certain Odors particularly Perfumes, as Musk, Roses &c. have produced it in some Women; in others it has been occasioned by particular Sounds. Hoffman & Whytt give us Instances of strong Light having thrown Persons into an Hysteric Fit. Retention or Suppression of natural or customary Evacuations particularly the sudden Cessation of the

Lochia or Menses from Cold & Moisture, obstructed Perspiration
Costiveness & other Causes of this Kind have been very properly
ranked amongst the Occasional Causes. Profuse Hemorrhages
of the Menses or Lochia & immoderate Diarrhoea will some-
times give Occasion for the Production of the Hysteria—
further, taking Cold when the Body is warm or fatigued
with Exercise; Plethora, Debility, Inanition, Fatigue
Watching, Acute Diseases, Pregnancy; Errors in the Quantity
or Quality of Drinks or Aliment. Fasting, Warm Drinks,
flatulent Food or Food with Regard to which the Person
has an Idiosyncracy, as Fish & Milk; strong Cathartics;
the Retropulsion of Arthritic or Rheumatic Complaints;
repelled Miliary Eruptions; Fluor Albus with acrid
ulcerating Matter in the Part; Schirrus Cancer of the
Uterus, Prolapsus Uteri; violent Pain with many other
Things of an irritating Nature and finally whatever
ouasions Commotions in the Nervous System may be
ranked amongst the Occasional Causes of the Hysteria.
Scarce any exciting Cause is required if the Disease
has returned frequently & become Periodical.

We are next to give the History & Course of the
Disease, not however in a regular Manner for this
would be next to an Impossibility. The Symptoms
imitate every Disorder & seldom preserve a certain Rule
or Type; they are scarcely ever the same in two different
Persons & they are even different in the same Person at
different Times. If the Attack is not sudden, sometimes
before the Fit is completely formed the Patient yawns &

stretches & fulsa Heaviness, Lassitude & Languor in the Limbs and Members of the Body, with a Lowness of Spirits; Flushings of Heat are frequently felt in the Forehead, Cheeks & Temples & Chilliness shifting from one Place to another. The Countenance is either pale or flushed; Pains are felt in different Parts of the Cheeks Loins & Extremeties, but these generally occupy the Back & some Part of the Head. The Urine is limpid like Water & is made in large Quantities. A Motion is perceived at first obscurely as if a Ball was moving backwards & forwards in the Abdomen; this appears as if it tended to the Diaphragm. The Ball appears to grow softer & larger, till it arrives at the Pit of the Stomach when it again contracts into a hard Lump. As the Ball goes up it occasions various Symptoms, some Parts of the Abdomen appear hard tense & prominent & others as if retracted - there is a rumbling Noise in the Intestines the Sphincter Ani is contracted that it will not admit Air to pass nor a Glyster-Pipe to be introduced. There is an Anxiety & Oppression at the Præcordia with a Sense of Tightness & Constriction - the Epigastrium appears as if distended - the Respiration is difficult anxious & small the Pulse is hard small & intermitting trembling & unequal & a dry convulsive Cough. These are attended with a singing Noise in the Ears, Sparkling before the Eyes, a Giddiness of the Head, a Heaviness of the Senses, the Patient is at length seized with a slight Fainting or is overwhelmed with Sleep.

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The Ball which is called Globus Hystericus afterwards rises into the Throat attended with a Tumor of the Fauces; the Respiration becomes thick & short with a Sense of Anxiety & Constriction so great as if the Fauces were drawn together & tied with a Cord or Bandage which threatens immediate Suffocation. The Voice is lost the Countenance appears livid & swelled; the Pulse appears almost abolished low small & slow; the Breathing is so imperceptible that it appears as if there would be instant Suffocation; the Eyes grow dim; the Patient at length sinks away into a Sleep during which she is either agitated with convulsive Motions or lies immoveable. When the Paroxysm remits the Sleep becomes more placid & she recovers with repeated slow Sighs; a rumbling Noise in the Belly & a Discharge of Flatulencies & sometimes a Serous Discharge from the Vagina; the Eyes open - the Heat & Color of the Countenance become animated & the Senses & the Judgment return with the Voice. After the Paroxysm they complain of Haviness & Pain in the Head, they remain infirm & torpid. The Paroxysms are sometimes attended with Convulsions; the Body is forced into various Positions; they exert unusual Strength & perform Feats which appear almost miraculous; they bend & extend the whole Body, they jump tremble & are twisted round with the utmost Velocity; they are distorted into a thousand different States; they generally retain some Sense, they hear see & know but the -

Remission of the Paroxysm they recollect every Thing that had
happed. They are sometimes seized with Convulsions which
resemble the Epilepsy, when they fall down suddenly
with a Loss of Reason & Sense. These Convulsions are
often preceded by a disagreable Sensation of cold Air
rising from the Pubes Feet & Arms & advancing
towards the Head & when it arrives here they fall down
senseless. These Convulsions are sometimes constant
but they generally intermit at times. After being
affected in this Manner sometimes the Motions cease
altogether & the Patient falls into a Sleep resembling
a Apoplectic, when they recover they are ignorant of
what happed since the Attack. Some are affected with a
Paraplegia or Hemiplegia, or a Paralysis of a particular
Part. They are sometimes seized with a Catalepsis; some-
times the Mind is more affected than the Body. The Tongue
appears as if chattering, but they observe no Order. They
flutter & speak Nonsense; they beat their Breasts as if
painful; they are agitated with dreadful Visions; they
are borne away by different & opposite Passions of the
Mind which succeed each other without any Reason.
Rage, Fear, Hope, Love, Hatred & Despair rapidly
follow each other — with as little Reason they change
from Crying to immoderate Laughter & are dissolved
in foolish Mirth. There are likewise considerable
Affections of the Brain; there is Dizziness of the Head
various Images present themselves before the Eyes, as
Flies. The Patient sometimes lies Comatose; there is
a sudden Abolition of Strength, Fluttering of the Heart

a Coldness of the Extremities & Syncope; the Mind & Senses cease acting; the Pulse & Respiration are diversified a Thousand different Ways. They lye immovable to all Appearance dead & continue in this State for one or more Days until they have been laid out for Interment and there are one or two Instances upon Record, related by grave Authors, of Persons in this State being actually buried & who came to Life again in the Vault in which they were deposited where they perished most miserably. Rigors & Trembling attack the Patient with a Coldness of the Extremities; a violent hitting Cold & severe Pains are felt in the Back Loins & Os Coccygis. There also wandering Pains with a Sense of Constriction as if the Part were tied or compressed with a Cord or Bandage. There is not seldom a severe, terse, dull or acute Pain of the Head, which are sometimes fixed, sometimes continue wandering, vague or periodical, sometimes on one sometimes on the other Side of the Head; at times it is seated externally in the Forehead with a Sense as if a Nail was driven therein hence it is called the Clavus Hystericus; these are almost always attended with a Giddiness & Sense of Fulness in the Head, a Singing of the Ears with an intolerable Sense of Heat & Cold & a violent Pulsation of the Arteries There is sometimes a Nausea & Vomiting of porraceous Bile; at times with excruciating Pains of the Teeth & Jaw with a Discharge of Saliva & a stinking Breath. There are sometimes acid, bilious & sulphurious Eructations so extremely acid as to set the Teeth on Edge. Heart Burn, Hiccough, Borborygmi with various Kinds of Pains, Pains in the Abdomen, Pit of the Stomach

and the Regio Colii. Some are attacked with an incessant & excessive Vomiting sometimes a Diarrhoea. Some are troubled with Colics & the Iliac Passion with Tenesmus & Cholera ending in Jaundice. Some have a constant & violent desire to make Water; in some the Urine is suppressed & only evacuated in Drops with a great sense of Heat & Pain resembling the Nephritis. The Color & Sediment of the Urine vary. In some Cases the Disorder returns periodically with a dry convulsive Cough, a Tightness of the Praecordia or a Palpitation of the Heart, a Giddiness or slight Fainty Fits.

This Disease is often complicated with other Diseases. When a Patient subject to this Disease is attacked with other Disorders, whatever may be their Form some Symptoms of the Hysterica will accompany them. It is evident therefore in different Cases different & even opposite Methods of Treatment will be required. The Paroxysms are of various Appearances & always of different Duration; some last only a few Minutes, some for Hours & even Days in general the more violent the Attack the sooner it ceases. Those which affect only a particular Part continue some time. In some the Disorder is not very apt to return, this depends on the general Habit of Body & the occasional Causes; in others it returns upon the slightest occasions & this is most generally the Case. The Disorder returns at uncertain Periods. The Accessions are different from each other; in some they succeed each other quickly & the Patient will have several Paroxysms

in a Day. They commonly attack at the Menstrual Period. or returning frequently they become in a Manner perpetual; they often become periodical when the same Train of Symptoms succeed each other in every Paroxysm. During the Intervals the Patient is sometimes perfectly well and quite free from all Complaints of every Pain. Others, particularly those advanced in Life, who are weak & in whom the Disorder has continued a long Time, during the Intervals complain of the Headach, Nightmare Watching, Dreams. This Disorder of itself is seldom mortal but there it lays the Foundation of other Diseases wc. prove more fatal in their Termination. Most Authors are of Opinion that the Hysteria & Hypochondriasis are the same Disease & should only have different Names as they occur in different Sexes; but tho' they agree in many Particulars & have many Symptoms in common, they have still more which are peculiar to & are characteristic of each Disorder. By comparing the Description of the Disorder just given with the Hypochondriasis it will appear that they are really distinct.

Persons subject to these Disorders differ altogether in Habit & Temperament. The Hypochondriasis generally attacks the Male Sex, tho' this is not always the case, as we have many Instances of the Hysteria in Men & many Cases called Hypochondriac were really Hysteric & vice versa. The Hypochondriasis generally attacks Persons of a melancholy Temperament

of a dry, rigid & lean Aspect & a dark Countenance, who have rough, black, curled Hair; the Veins are large & turgid; they are generally subject to Costiveness & the Piles; they possess a calm tranquil equal & constant Mind; are sedate & reserved. It generally attacks Persons in the Decline of Life. It advances by slow Steps, is constant & perpetual & continues for Months and Years by Day & by night without Interval & is seldom radically cured. It is evident from what has been said how different the Hypochondriasis is from the Hysteria. The Hysteria is chiefly confined to Women. it occurs in the Prime of Life in Persons of a sanguineous Temperament who are possessed of great Sensibility & Irritability of Nerves & Mobility of the System. The Paroxysm is violent & sudden but is soon over perhaps never to return. During the Interval the Patient enjoys an uninterrupted State of Health. Some Symptoms are exactly similar in both, as in the Alimentary Canal the Distension of the Abdomen, the acid Eructations, the Coardialgies &c are the same in both; but these Symptoms likewise occur in other Disorders, as in the Chlorosis, in Suppression of the Menses & in the Gout. In the Hysteria the Symptoms are more violent & more purely Spasmodic & convulsive. They are likewise more extended over the System. In the Hypochondriasis the Symptoms are less violent & are confined in a great Measure to the Alimentary Canal. The moveable Ball & Constriction of the Fauces never occur in the Hypochondriasis nor is the Abdomen contracted by Spasm nor the Navel retracted as in the Hysteria. The Habit & Frame of Mind is also different. The Hypochondriac is in every Place & always melancholy sad, anxious, fearful, suspicious, diffident, apprehensive

are always foreboding some ill Fortune to themselves. They give up all Hopes of Recovery. They forsake their most assured Friends they loath the World & every Thing therein. They are fond of Solitude & fly Society. Their Mind is intent on one Object both Day & Night from which they are diverted by Dreams, vain Fears & Terrors. When the Mind can be drawn from this Subject they reason with Judgment on others & even seem to possess superior Judgment, Prudence & Sense. The Hypochondriasis is distinguished from Melancholy only by being accompanied with Affections of the Alimentary Canal. It is not rare to find the Hypochondriasis change into a real Melancholy & even Mania. If there is Melancholy in Hysteria it seldom continues long & is soon succeeded by Joy, Mirth and Laughter. The Mind is seldom intent on one Subject. The Transitions from one Subject to another are sudden and the Sensations & alternations from one Thing to another are sudden. When the Paroxysm is over the Patient possesses a sound Mind & an healthy Constitution. Both the Disorders may be complicated with each other in the same Person. The Hysteria may be changed into the Hypochondriasis partly from advanced Age & partly from Obstructions being formed in the Viscera. The Hysteria is often produced from Suppression of the Menses & the Repulsion of various Eruptions. It is very probable that Pains in the Head, Affections of the Alimentary Canal, Cardialgia, Flatulencies & Acidity which occur in the Chlorosis, Arthritis &c. when they take Place in a Female have been too often mistaken for the Hysteria & it is this probably which has led Physicians to consider the Hysteria as very frequent & inconstant. We—

We are next to treat of the best Method of relieving the Disorder but previous to this we must premise with respect to the Prognosis, that tho' the Disease may appear very alarming, the Fear is generally greater than the Danger. A Paroxysm of the Hysteria seldom proves fatal, sometimes however it ends fatally. It destroys some in the Form of an Apoplexy in others it produces great & long Faintings & some are carried off by severe Convulsions. The Danger is to be estimated by the Manner of coming on, the Strength of the Patient, the Severity, Number & Duration of the Paroxysms likewise from the Manner in which the vital Functions are affected - for the Danger is proportioned to the Degree in which these suffer. But tho' there is little Danger during the Paroxysm the Disorder is extremely apt to return upon the slightest Occasions & to become habitual & periodical. It is sometimes changed into an Epilepsy when it is exceedingly difficult to cure & very obstinate & often continues to afflict the Patient till the Day of her Death notwithstanding all the Efforts of the Physicians. By the repeated Attacks the Strength of the Patient is impaired & the Natural Functions are affected - the Vital Functions are also variously affected which proves a fresh Source of innumerable Evils. The different Changes of the Body by advancing in Life will sometimes diminish the Violence of the Disorder & render it less frequent & sometimes by removing the Predisposition will remove it intirely. When the Predisposition to the Disorder is very great, when it arises from some fixed but latent Cause, when it returns frequently, when the Paroxysms are long, when the Disorder has become periodical or has degenerated into an Epilepsy when it is attended with a Suppression of the Menses, the

the Hypochondrical Disease or other Complaints for the more of these co-operate the greater will be the Difficulty of Cure. On the other Hand if the Patient is young, the Disorder recent, if it has arisen from Affections of the Mind or Suppression of the Menses. The fewer alarming Symptoms occur the easier & quicker will we relieve our Patient —

The Indications of Cure turn on three Points —

1st To remove & guard against the Occasional Causes

2d. To mitigate, shorten or relieve the Paroxysm & to guard against the Consequences &

3d. To prevent the Return of the Paroxysm, by avoiding the Occasional Causes, correcting the Predisposition of the System to the Disease by restoring Tone to it —

First with Respect to the Occasional Causes. These are sometimes external & transitory — they are very various but are particularly such Things as excite the Passions of the Mind or they may be constant & inherent in the Body, such as Suppression of the Menses, Fluor Albus &c. For this Reason it is evident that it sometimes requires even different & opposite Treatment from what it does at other Times —

With Respect to the second Indication — when the Symptoms of the Paroxysm are slight there is little Occasion for Medicine & we may as well abstain from the use of it. But if the Accession is severe we should afford the most speedy Relief in our Power. If there are Symptoms of Plethora or the Disease has been brought on by Cold or a Suppression of the Menses, particularly when this has taken Place, Bleeding will afford instantaneous Relief —

Relief - wherever there are Symptoms of the Blood being obstructed and stagnating in the Head or Lungs, when the Respiration is difficult & short, the Countenance livid, when there are Symptoms of Coma or Lethargy we should never hesitate to take away some Blood, tho the Pulse is small & vibrating for the Pulse in these Cases will often become stronger & quicker upon bleeding. We should never order Bleeding but with Caution & Circumspection & it is a general Observation that unseasonable Bleeding has been attended with the worst of Consequences & has even destroyed the Patient - It is to be considered only as a Palliative, affording temporary Relief. If only a small Quantity is to be taken away or a particular Symptom requires the loss of some Blood, this is better accomplished by Leeches or Cupping Glasses with Scarification If the Disease is accompanied with Spasmodic or convulsive Motions, Perturbation of the Mind & Delirium Sedatives & Antispasmodics of the milder Kind are to be employed. If there is a Syncope, Catalepsy, Coma or abolition of the Senses we should cautiously & with Prudence administer what are commonly called Nervous Medicines or the stronger Antispasmodics, by the Stimulus of which Sensation & Motion are excited - the weaker Medicines should be first tried, when these fail we should have Recourse to the more powerful. The heating, acrid, violent & stimulating Substances should always be avoided - these always increase the Anxiety at the Precordia, render the Respiration difficult & increase & excite Convulsions. These Remedies should be given as much as possible in the Beginning of the Paroxysm - when these given they will often prevent

many of the Symptoms which would otherwise occur. The Patient should first be recovered by external Applications. Various Methods are employed for this Purpose. Volatile Salts & Volatile Spirits, Vinegar, Ratios, the Smoke of Candlewicks, burnt Feathers Leather & Bones, the Smoke of Tobacco & Asafoetida are to be applied to the Nostrils. The Breast Abdomen & other Parts are to be rubbed with woolen cloths impregnated with Camphor & fetid Epithems, Ether, aromatic Plaisters & anodyne Glysters may be used with Advantage Pediluvia may likewise be employed. Cold Water may be thrown into the Face & Breast with Sponges. This is every Day used when Syncope comes on. If the Syncope does not yield to these Applications & the Patient has no Appearance of Sense & Motion, strong Sternutatories Vellicatories, Glysters & Emetics even of the acrid kind may be used. It is sometimes difficult to tell whether the Person is dead or not. in this Case some advise us to make loud Cries, to prick the Body in various Parts, to apply strong Sternutatories & even the Actual Cautery to the Soles of the Feet. but there is no Doubt but these are disagreable & dangerous Expedients. We should be cautious how we employ strong Sternutatories when the Countenance is livid & bloated lest we should occasion the Rupture of some blood Vessel of the Lungs or Brain. We should have Recourse to gentler Methods as the gentlest & least stimulating Cantharides, the Warm Bath & moderate Friction. If any internal Medicines are requisite they should be given in Solution & large Doses. Op:

Opium, Camphor, Æther, the Vol: Alkali & the various combinations & Compositions that may be formed from these are most proper for this Disease. The Dose & Choice are to be regulated by the Habit of the Patient.

After the Paroxysm is removed the Patient is to be kept in Bed & refreshed by cordial & exhilirating Medicines and Drinks, by which I mean in general Vol: Medicines. We should be careful to prevent a Return. this is to be effected by avoiding every Thing that may dispose to this Disease or may serve as an Occasional Cause to excite it afresh. But is principally to be done by correcting the Predisposition in the System & the too great Sensibility & Irritability in the Prima Viæ & of the Nervous System in general. We should strengthen the Body & guard Against those Things that may effect a Return of the Disease. A radical Cure is to be obtained only by a proper Regimen & Mode of Life. The Regimen is to be regulated by the Habit of Body, the Idiosyncracy of the Patient & the Cause of the Disorder. The Regimen should be more or less strict as Circumstances may require; the Food should be nourishing easy of Digestion & should be taken in small Quantities at a Time & repeated at Intervals. Hunger & Fulness should be equally avoided; we should refrain from every Thing irritating; we should on the one Hand avoid ~~every Thing~~ hard, salt, smoked & fat Meat & rancescent Food of all kinds & on the other Hand watery insipid acescent & flatulent Vegetables. Fish—

Fish & Water Fowl are apt to disagree, particularly about the Menstrual Periods, they therefore should be avoided. A Milk Diet is the best Food when it does not disagree with the Stomach. Toast & Water with a little Spirit is the most proper Drink - Old Wine as being weaker & less acescent is excellent. Pure cold Water is often the best & least exceptionable Drink; it sharpens the Appetite & promotes Digestion. A pure, open, dry, heavy, dense Air is proper in this Disorder. A warm confined Air debilitates the System since the Patient ought not to be confined in a small narrow Chamber tho' her Circumstances will admit should live in the Country & enter into the Business of a Country Life. The Body should be clothed with Garments suitable to the Season & Climate. When the Season requires a Change of Dress this should not be sudden but the Alteration should be made by Degrees: We should guard against Heat & Cold & sudden Transitions from one to the other. We should on the one Hand equally avoid the Hot Rays of the Sun in the Meridian & on the other the moist Exhalations of the Morning & Evening Air. The Patient should never go into the Cold when she is warm. Moderate Exercise cannot be too much recommended - this promotes Digestion increases the Action of the Vessels, quickens the Circulation of the Fluids & strengthens the Secretions & Excretions; it strengthens the System gives Vigor to the Body, diminishes the Sensibility & Irritability of the System & raises the Spirits. Moderate walking or riding in a Carriage is highly useful, but riding on Horseback is

is superior to either - this in the Beginning should be moderate & at length increased as the Strength will admit. It is most proper in the cooler Hours in the Forenoon before Dinner. it should never be used on a full Stomach or in the Cold, moist Evening Air nor should it be continued until the Body is fatigued. The Exercise should be varied, long Journeys therefore thro' different Countries are more useful than the same Degree of Exercise in one Place for by continually shifting the Scene the Mind is entertained with new Objects, which at the same Time that they entertain & please will have considerable Influence in removing the Disease. Long Sea-Voyages on Account of the wholesome Sea Breezes & the continual uninterrupted Motion of the Ship are particularly useful. The Sleep should be moderate & if necessary should be obtained by proper Medicines - too much Sleep is hurtful - The Patient should not go to Bed immediately after Dinner nor too lately after rising from Supper, they should not lye too long in the Morning, tho' in the warmer Climates an Indulgence in this Respect is necessary. Whatever has a Tendency to keep the Mind chearful, to delight the Eye & please the Senses should be carefully sought after. Passions of the Mind or offensive Objects are to be avoided as whatever increases the Disease & favors the Disposition to Obstruction. The natural & habitual Secretions & Excretions are to be particularly attended to - we should keep the Bowels & Senses regular. It -

It is sometimes necessary to evacuate the Stomach & Bowels by a gentle Emetic or Cathartic before any other Remedy is employed. The Bowels however should be kept regular chiefly by a proper Regimen. The stronger Cathartics are doubtful. When Mobility is connected with a sanguineous Habit the Diet should be thinner & lower than in other Cases. When Fulness appears to favor the Disease especially about the Period of the Menses, if they do not flow in sufficient Quantity or are altogether suppressed, bleeding will generally give Relief. We should however take away Blood sparingly & cautiously as repeated Bleedings debilitate the Body favor the Generation of Plethora which fixes the Disorder more inveterately in the System & exposes the Patient to frequent & severe Returns of the Disorder.

There are three Classes of Medicines which act by diminishing the Sensibility & Mobility of the System in the Cure of Hysteria. The first & second comprehend Narcotics & Antispasmodics. The third are Astringents or what are commonly called Tonics or Roborants. The former act quickly & their Operation is transitory, they leave the Body weak & the Mind languid & depressed & are to be considered only as Palliatives. The radical Cure will depend in a great Measure upon the Use of Tonics. Sedatives & Antispasmodics are necessary when the Paroxysms return frequently to diminish the Violence of the Disease & they will sometimes

remove the Disease radically, where it depends on too great Mobility of this does not depend on Debility. When the Disorder has become periodical this Medicine should be given before the Paroxysm - Instances of the Disorder being cured in this Manner you will find in Dr Whytt. Amongst these Remedies Opium deserves the first Place. Many Opinions have prevailed concerning it - by some it has been thought a precarious Remedy in those disposed to Costiveness - after its Operation is over it is said to leave the Body languid & the Spirits depressed & as it impairs the Organs of Chylification, debilitates the Faculties of the Mind, say they, it impairs the Strength & aggravates the Disease & we should therefore abstain from its Use. These Arguments appear to carry with them more Weight than they deserve. These Evils might probably take Place if we were not at the same Time to employ such a Regimen & Medicines as would counteract its bad Effects. It is often of singular Service; 'tis more sudden & constant in its Effects than any other Medicine & indeed I know not what Physicians would do without it.

Antispasmodics may be generally employed for Relief of Hysterics, these are Vol Salt, Ether, Musk Camphor & Fœtid Gums - they are chiefly to be used either immediately before or during the Paroxysm when they moderate & mitigate the Fit. The Pediluvia are of great Service. When the Paroxysm is severe & the Disorder returns in the Form of an Epilepsy

at stated Periods with a Sensation of Coldness proceeding toward the Head, if we throw a Ligature tight round the the Body where the Coldness has not reached it will often prevent the Paroxysm from coming on or at least mitigate its Violence.

Our chief Dependance for a radical Cure must be on a proper Course of Astringent & Tonic Remedies together with a judicious Regulation of Diet, using such as will correct the Predisposition or counteract the Sensibility & Irritability of any particular Part, as the Alimentary Canal, or the Mobility of the System which is owing to or accompanied with Debility & Relaxation - This is evident from the Disease being most common in those Persons who have Diseases of the Viscera viz young Persons, in the female Sex who have been broken down by Diseases as the Consumption. In the old, in Men & in the colder Regions, morbid Mobility is less common. Where Mobility & Debility are combined Tonics are chiefly proper; even in irritable Habits where there are no evident Signs of Debility. They act principally on the Stomach or the Part to which they are immediately applied - they restore & confirm the Tone of the whole System - diminish Mobility - excite the Appetite & promote Digestion - cause all the Functions to be properly performed & regulate the Motions of the Solida Viva firm & stable. They should be given only during the Intaval of the Paroxysm - their Use should be persevered in for a considerable Time

They should be administered with Caution in Persons of a sanguineous Temperament & of a plethoric Habit and where there are Signs of Visceral Obstructions. The Peruvian Bark & the Preparations of Steel are the best Medicines if there is not a Peculiarity of Constitution which forbids their use. They should be combined or given alternately, that is at different Times in the same Day - they answer better given in small and repeated Doses. A Purge is generally directed to be given at Intervals; but this Practice is erroneous, for by one Purge we may destroy the good Effects of a Week. Chalybeate Waters are of great Service when the Stool is Substance nor the Bark can be employed. Bitter Aromatics, acerb Vaustere Wines are also very proper - Red Port & Claret are the proper Vehicles for administering Medicines. Cold Bathing is the surest & most effectual Remedy when continued for a sufficient length of Time - It should be used chiefly in the Morning provided the Shock can be borne. The choice, Quantity, Form & Composition of the different Medicines should be regulated by the Strength & Habit of the Patient. We should always administer a new Medicine with Caution & Circumspection and we should make repeated Trials before we persist in the use of any Medicine. One Medicine will frequently succeed in one Patient & fail in another. Besides these some Medicines have been reckoned Specifics in the Cure of this Disease - Some have been supposed peculiarly adapted to particular

Cases.

Some advise rough & violent Methods, as acrid Emetics &
Cathartics in Women of a strong & masculine Habit of
Body, but their Effects are always doubtful. In Women
of a weakly Constitution & thin spare Habit, Issues &
Setons will preserve them from more violent Affections.
Some violent Affection of the Mind, as great Terror, may
also prevent the Paroxysm from coming on & cure the
Disease altogether. Of this I had an Opportunity of observing
an Instance in a young Girl violently affected with
the Hysteria at Edinburgh for which a Variety of
Medicines had been tried without affording Relief; at
last the Physician in Attendance, D. Sutton, in her
hearing ordered Pincers & Irons to be heated red hot &
directed the Attendants to tear her Flesh with them
in order to recover her from the next Paroxysm.
This made such an Impression of Terror upon her Mind
that she never had another Fit. A Case is related,
which came under the Notice of the Great Boerhaave
in the Poor-House for Orphan Girls at Haerlem. Ten
Girls were seized with the Hysteria in Consequence of
seeing one in an Hysteric Paroxysm: Nothing could
be done until Dr. Boerhaave ordered them to be
burnt to the Bone with a red hot Iron, which
effectually cured them & none were ever afterwards
seized with the Disease. It is astonishing how the Mind
is affected by seeing Passions & Affections even in indif-
ferent Persons! Armies have been inspired with Courage
or Panic struck with the Bravery or Cowardice of a

a single Man. Also what happens every Day in Convon-
ticles, where from enthusiastic Preachers a great Part of the
Audience are affected in the same Manner with the
Preacher & assume his various Agitations & Contortions.
I mention these Instances to show what great Influ-
ence the Mind has upon the Body. It always requires a
great Accuracy of Judgment to determine the Time & Cases
when & when the Passions may be employed with Safety
and Advantage. Notwithstanding all our Endeavors
all our Remedies have sometimes little or no Effect in
preventing the Predisposition, & tho' they mitigate they
frequently disappoint us in our Expectations of a
perfect Cure. They sometimes aggravate the Disease
we should therefore abstain from their use. Most
particularly to a proper Regimen, Exercise & the
cold Bath. A Change of Air, Climate Place of abode &
Manner of living have sometimes performed above
Age by changing the Temperament has been of
Service to many. Matrimony & Child Bearing
have relieved Numbers.

Lecture 29th.

We now come to speak of particular Antispasmodicks - & first of

Asafoetida. This Gum has long been used in various Diseases. It has been looked upon as a good Antispasmodic & Stimulant. It yeilds its Virtues sufficiently to Water - I think I have seen Effects from it in Solution which it would produce in Substance. I generally give it in Solution ℈ß of the Gum to ℥vj or ℥viij of common or plant Water a Tablespoonful of which may be given at a Time and repeated as Circumstances may require. In flatulent Spasmodic Colics it may be given by way of Glysters - ℈ij may be dissolved in Water with 50 or 60 Drops of Laudanum. Combined with Opium it may have good Effects in low Nervous Fevers. For its History in Kempfer's History of Japan - vide also D. Cullen's Mat: Med: for a fuller Account of its Virtues ——

Gum Ammoniac is a weaker Antispasmodic than Asafoetida but has generally been thought to be a more powerful Expectorant. A watery Solution of this or what is commonly called Lac Ammi: is often prescribed to promote Expectoration & when a gentle Stimulus is necessary this will answer very well, but the most powerful is the Volatile Alkali. The Sal Volat. of Hartshorne & Ammoniac are of the same Nature. The former is the Lead pure or Basis of the Empyreumatic Oil that adheres to & rises with it in Distillation. (The

The Vol Alkali is an Antispasmodic & Stimulant & from Pringles Experiments a most powerful Antiseptic. Hence it is particularly calculated for the last Stage of Nervous Fevers where it answers every Indication that occurs & I have frequently experienced the most favorable Effects from it. I generally give it in Boluses Gr. V. or vj in each one of which is to be taken every 2 Hours. If there is a Diarrhea I combine 1/3 or 1/4 of a Gr. of Opium with each Bolus. If there is a costiveness or the Skin is dry Gr. 1/6 of Tart. Emet. may be added to each Dose. This Medicine is now frequently employed for the most violent Spasmodic Disorders. That it possesses a stimulant Quality is evident from its inflaming the Skin when applyed to it in concentrated State, but it appears as if its Action was very much confined to the Part to which it was applied. Tho I have given it internally in a Variety of Cases I never observed it to quicken the Pulse, but on the contrary often renders it slower & fuller. There are some Facts which make it probable that it acts as a Stimulus to the Nervous System without stimulating the Blood Vessels. In one or two Instances I have observed a burning Sensation in the Stomach from its use which obliged me to desist from giving it. When this Symptom is troublesome it may be removed by a little Acid of any kind which will destroy the Alkali. Its Antiseptic Virtues have been established by Dr Pringles Experiments. He found it to be a most powerful Antiseptic. Before his Time the Opinion was universal, That as it

as it was the Produce of Putrefaction it was the Cause of Putrescency; that it was a Septic & produced a Dissolved State of the Fluids. This Opinion still prevails in some Measure, as it is difficult to get the better of long established Prejudices; but Opinion should never be put in Opposition to Experience. I have never hesitated to administer it in the last Stage of a Nervous Fever where a Septic Tendency takes Place & with the most marked Success. Its Use is by no Means confined to the Nervous Fever; it may also be employed in the last Stage of Inflamatory Fevers even in the Pleurisy & Peripneumony where the Powers of Life begin to fail & the Expectoration is checked from Debility when I have used it freely with as much if not more Success. It is excellent in Spasmodic Disorders of the Stomach & Intestines with or without Flatulency. If the Pain is violent we may combine Opium with it & I do not know a more certain & quick Remedy nor am I acquainted with any Combination that will produce similar Effects. When the Complaints arise from Acidity & Indigestion occasioning Irritation, as a Stimulant and Antispasmodic, and combined with Opium a Sedative, it answers every Indication. In the wandering Gout the Vol Alkali may be given internally - Sinapisms applied externally to the Legs; Cordials Spirituous Drinks may be used, as generous Madeira or very good Brandy - On these we place our greatest Dependance if they fail

and if they fail there are but slender Hopes of Recovery.

Castor has been employed for the same Purpose & in the same Intention as Asafoetida & has often been combined with it. The Combination, as neither Medicine is improved & the Bulk is increased which renders the Dose more nauseous, I think may as well be let alone. I have not often employed Castor as I have never seen any Virtues from it which might not be obtained from Asafoetida. The Cases in which I have ordered it has been where the Patient were very much averse from Asafoetida & then I have given it from 15 to 20 or 30 Grains for a Dose, tho' even in this Dose it is less certain than the Asafoetida —

Musk. I am under the same difficulty with respect to this as Castor. From the high Price of this Medicine & it being but seldom to be procured genuine I have used it more seldom than I otherwise would have done. I have used with success in one Case of Convulsive Hiccough in Dose of Gr. 15. It has been considered by most Physicians as an Antispasmodic but I believe few speak from the Experience which they themselves have had. Musk & Cinnabar constitute the Chief Remedy for the Hydrophobia which was formerly depended on as a Specific for the Cure of this Affection. From my own Experience it appears to possess some Virtues. In the Case of Convulsive Hiccough it afforded speedy & effectual Relief.

Ol.

Oleum Animale is used by the German Physicians as a powerful Antispasmodic & recommended for the cure of Epilepsy. It is not in use here & therefore not to be had in our Shops however desirous we might be of giving it a Trial.

Æther. The Antispasmodic Effects of this are now pretty generally known. As it is very volatile its Effects are sudden & transitory. It has been use in Spasmodic affections, 50 or 60 Drops or even more may be taken in Water, when its Effects will be instantaneous if it produces any at all. In the Arthritis when it fixes on the Stomach one or two Teaspoonsfull may be given & if its Use is to be attended with Success this will happen in a few Minutes. It has also been used in external Applications. In the Nervous Headach it has been attended with Success when applied to the Forehead. This was kept a Secret by the late D.r Ward. It may be applied in Cotton & covered with a Bladder.

Oleum Succini, Haarlem & British Oils, have been used in Spasmodic Affections externally and internally & frequently afford great Relief. The British & Haarlem are the Empyreumatic Oils of some Substances. It is perhaps not material from what Substances we extract them; they appear to be of the same Nature. They are Stimulants and Antispasmodics, they should therefore never be used

when there is Fever, particularly if there is any Inflamation. In Toothach, Earach or other topical Pains it is often used. I mention these Cases that you may be able to determine in what Cases they are proper & in which they are forbidden.

Camphor. This is a Medicine which for the Good or Harm it may do deserves a particular attention. Most Physicians are but little acquainted with its real Virtues while some recommend it as a powerful Remedy, others reject it as a dauntful fallacious & insignificant Substance. It would be tedious to relate the various Opinions which have been entertained respecting it therfore I shall after a few Observations refer you to Dr. Cullen

It is a Substance sui generis, to which there is nothing analogous in Nature & which can not be imitated by Art. It has been disputed, whether it acts by increasing the Motions of the System; whether it increases or diminishes the Heat of the Body; whether it dilutes or thickens the Blood Hastily in what Diseases it may be used with Safety. To ascertain these various Experiments have been instituted.

Dr. Monro made some Experiments on Frogs with Camphor. He found that when externally or internally applied it brought on Torpor & Insensibility; that it lessened the Number of Contractions of the Heart but rendered each Pulsation stronger & fuller.

Menghini made a great many Experiments with it on Quadrupeds, Birds & Fishes which are related in the Transactions of the Bologna Society. He observed that it threw some into a deep other into a placid sleep; in some it produced Tremors & Madness; some it vomited others it purged & in many proved diuretic; in some it brought on Rigour, in some an Anxiety & in many it produced Epileptic Fits & to most it proved an acrid Poison if given in sufficient Quantity. These however are not so much to our Purpose as those made on the Human Body— Hoffman in his Dissertation on Camphor tells us that he frequently gave ℈j or ℈ß of Camphor dissolved in Sp! Vin: to Persons in Health without any Appearance of those Effects which proceed from Stimulants: The Warmth & Heat of the Body were not increased, nor was the Pulse quickened nor the Color of the Urine heightened nor any Thirst produced. He gives us a Case where ℈ij of it dissolved in Olive Oil were swallowed thro' Mistake. It was scarcely swallowed before a Vertigo which the Patient had before was considerably increased the Extremities grew cold & the Countinance pale; the Pulsations of the Arteries were very small & languid; there was an Oppression & Anxiety at the Precordia & a cold Sweat broke out on the Head the Patient had a disturbed Imagination & a Dispotition to sleep—

Pointeau

Pointeau a late French Writer of Character relates a similar Case. A Woman was seized with a Colic for which she took ℈. 60 of Camphor in Half an Hour not long after the Pain ceased intirely; the Patient was stripped & put into Bed, where she was seized with a Coldness & Paleness of the Body without Tremor which seemed to threaten immediate Expiration. The by Standers endeavored to warm her by giving a few Spoonsful of sweet Wine & by the Application of warm Cloths; but the Coldness continued near an Hour & went off without a Sweat. It effectually relieved the Colic for which it was given.

A Gentleman took ℈. ℋ of Camphor made into a Bolus with Conf: Ros: at 8 o'Clock in the Morning; he perceived no Alteration until two Hours after when he felt a Nausea & Vertigo - he was in such a State of Delirium that on Account of the Confusion of his Ideas he could give Attention to Nothing. At 12 o'Clock he had an Inclination & violent straining to vomit tho' Nothing but a little Bile was brought up: he drank warm Water to encourage the Vomiting but without Relief. He had a great Deprivation of Strength in his lower Extremeties & staggered in attempting to walk. During the Vomiting the Pulse was small & languid but afterwards became quicker. He then eat 2 or 3 sweet Oranges & went to Bed where he fell into a profound Sleep which continued 3 or 4 Hours. & when he awoke he found himself perfectly well & his Pulse under the natural Standard & more full than common.

He felt some Lassitude which he ascribed to vomiting.
The same Gentleman some Days after took 9ss. of
Camphor every Half Hour until he had taken 40 Gr.
He found that it did not act as a Stimulant but
rather as a Sedative & Antispasmodic —

The next Case is that of a Gentleman which we
shall relate in his own Words. "I took 3ij of Camphor
made into a Bolus. Previous to this I had applied
to the Pit of my Stomach Farenheits Thermometer
in which the Mercury stood at 72°. when it arose
to 90° that is 18° in 5 Minutes. My Pulse beat 77
Strokes in a Minute. Ten Minutes after I again
applied the Thermometer when it arose only 13°. in
5 Minutes my Pulse continuing the same as before.
Three Quarters of an Hour after I again applied
the Thermometer when I found the Heat the
same; my Pulse now beat 10 Strokes higher a Mi-
nute. A Quarter of an Hour afterwards I had
a Dizziness of my Head so that I could hardly
walk out of the Room: I then opened the Window
and thrust out my Head but the Objects in the
Street appeared in a very confused Manner &
was with Difficulty I could keep myself from
falling. I then laid myself on the Bed & endeavored
to amuse myself with a Book but here every
Thing appeared as confused & irregular as in the
Street. However made Shift to run over 2 or 3
Pages but could not commit even the shortest
Sentence to Memory. I then threw down my Book
left the Bed & tried to Walk & found that my Judgment

Judgment was totally disturbed & that every Thing was become worse. I then again laid down upon the Bed and had Recourse to my Book but what became of me afterwards I know not. My Brother who was with me, said that I lay composed for some Time; that I then sat up & made an Effort to vomit but brought up Nothing; that I looked frightfully, frothed at the Mouth; that I endeavored to tear every thing near me & at length threw myself upon the Bed with strong Convulsions & miserable Cries. After this severe & almost fatal Affliction I began to recover & the first Person I recollect to have seen were my Brother & Dr. Cullen who had been sent for & whose Presence gave me great Pleasure. Every Thing now appeared new & wonderful to me & it seemed as if I had just entered into Life. I could not recollect what had passed nor did I know that I had taken the Camphor, nor did any other Person know it — it was therefore thought that I had been in a Fit of the Apoplexy & Bleeding was prescribed, to which I absolutely refused to submit. My Pulse now beat 100 Strokes p. Minute. I got out of Bed & demanded some Volatile Salt which was brought but afforded me no Relief. I then threw myself on the Floor & found Relief from the Coldness of it. I directed cold Water to be poured upon my Hands & Face. Dr. Monro sen. happened to call in at this Time & found a Paper on the Floor on which was written the Word Camphor. My Pulse was still at 100 & was full & equal — Dr.

Dr. Monro ordered me to drink large Draughts of warm Water to excite a Vomiting, Altho' it was upwards of four Hours since I had taken the Camphor, I vomited up a considerable Part of it which at this Time had remained in the Stomach undissolved. I now first recollected that I had taken the Camphor but could not till for what Purpose. I then eat three Oranges but received not Benefit from them — Still had a Headach but my Judgment was not so much impaired. I then took some Tea an Hour or two afterwards some Juice of Lemmons. My Pulse was now reduced to 80 & When the Thermometer was applied to the Pit of my Stomach it arose 2. or 3° above the natural Standard. The Headach continued all the Evening & my Thoughts were still incoherent — about 8 or 9 Oclock I took some Broth & went to Bed. The next Morning I was free from Pain but felt a Sickness & Stiffness & I had a costive Stool — It was four Days before my Head was perfectly restored." Here we find that the Pulse was rendered quicker & the Heat of the Body increased but not in the Beginning. These Effects seem rather to be owing to the Nausea & other Symptoms which were produced from taking the Camphor in too large a Dose. The Pulse was not quickened nor the Heat increased until the Camphor had remained a considerable Time on the Stomach.

Camphor appears to be rather of a Sedative Nature and that it does not increase the natural Heat-

It lessens the Heat of the Body in Fevers, removes Spasms and Convulsions & diminishes the Frequency of the Pulse & Circulation. Whether it does this in every Disease & in every Stage can be determined only by Experience. From the above related Cases it appears that Camphor does not hinder the Putrefaction nor occasion a Fullness of the Vessels of the Head & Face, nor does it produce an Accumulation in the larger Vessels; neither does it leave the Body more irritable, all which Effects attend the Exhibition of Opium. It therefore can be ranked neither among the Stimulants nor Sedatives as its Mode of Operation is different from either; but it must be placed in a distinct Class viz, Antispasmodics, & this with a few other Substances render it necessary to form a distinct Class. It is not attended with the heating Effects of Stimulants nor the Disadvantages of Sedatives — It is proved by Dr. Pringle & others to be highly Antiseptic, one Grain being equal to 60 Grains of Common Salt in preserving Animal Substances from Putrefaction & making allowance for the Parts which exhale it resists Putrefaction as 300 to 1 in Proportion to common Salt. However these Experiments must be carried further before we consider them as conclusive That Camphor is a good Safe Medicine in Putrid Fevers — For the Remainder see D. Cullen's Materia Medica Page 368.

We now come to treat of those Medicines which have the Fluids for their Object. It is unnecessary for me to enter upon the Consideration of the Fluids as Dr Cullen has treated the Subject so fully to Him I therefore refer you. I imagine you are not now to learn that the Blood is composed of three Parts. Other Matters may be occasionally present but cannot be considered as constituent Parts.

From observing the appearances & Changes which the Blood spontaneously undergoes & the Effects which different Substances when mixed with it without of the Body produce, Physicians very naturally concluded that they would produce the same Effects when taken into the Body & that the different States of the Fluids would produce Diseases. By Chemistry the Blood is decomposed & resolved into Parts intirely new which did not formally exist before Decomposition. Increasing or diminishing the different Parts of the Fluids they imagined occasioned various Indispositions. This led Physicians to institute accurate Experiments on the Blood out of the Body to ascertain the Effects & Changes they produced on this Fluids. But these Experiments which were made out of the Body do not prove that the same Effects take Place when these Substances are taken into the Body. All Vegetable Substances undergo a Fermentation in the Stomach; metallic Salts are frequently decomposed by the Acid in that Organ, whence both are altered or changed from their original Form. This has led others into an opposite extreme

paying no Regard, in Speculation at least, to the Fluids. They consider the Blood of no more consequence than so much Water thro' our Vessels. But this will never apply in Practice for there are certain Diseases in which the Blood is most undoubtedly vitiated & even primarily affected. An Instance of this I gave you in the Scurvy, in which our principal Indication is to restore the Fluids to their natural State and Quality. This Disease is gradual in its Approach and the Blood is most certainly contaminated and is only to be relieved by a Vegetable Diet or such a course as will correct & restore the vitiated State of the Fluids. Medicines & Diet affect the Blood, which is evident from Children being affected by the Nurses taking Medicine or Food. There are Instances of the Venereal Disease being cured in Infants by the Nurse's taking Mercury. Dr. Young tells us that the Milk of a Bitch was changed by living a few Days on Vegetables & became as acescent as the Milk of Animals that feed on Grass & Herbage. The Urine will be changed by taking particular Substances without the animal Functions or the Action of the System being increased or diminished. If a Person were to live altogether on Animal Food he would in a short Time be seized with Putrid Diseases not easily cured. These Facts are too evident to leave a Doubt that our Fluids may be primarily affected but I do not suppose that the Causes of Diseases are so frequently lodged in the Blood as has been imagined.

We shall treat of the Changes which the Fluids may undergo under each Class of Medicines. The first Class is the Attenuants of which in our next Lecture.

Lecture 30th.

Attenuantia.

These are such Medicines as correct the Viscidity and Lentor of the Fluids. It is a very great Doubt with some whether this Indication ever occurs; for the present however we shall allow it as it will afford us an Opportunity to treat of the different Substances that have been ranked under this Head.

Water is undoubtedly an Attenuant but we shall not consider it in this limited View. We have already spoken of the external Application of both warm & cold Water; we are now to speak of its internal Use & first of—

Cold Water. This taken into the Stomach acts as a Stimulus, removes Oppression there, assists Digestion & promotes the Expulsion of the Feces; by its Effects in the Stomach it causes a Determination to the Surface of the Body & frequently produces a Sweat; hence it is useful in Vomiting which is owing to a Spasm & Constriction of the cutaneous Pores. This occurs in the cold Fit of Intermittents & appears to be excited by Nature to restore the Determination to the Skin of the Humors which have been forced to the internal Parts. To remove this we generally give the Saline Draught, but large Draughts of cold Water will answer equally well. Tho' anciently proscribed & at this Day the Physicians of Spain & Italy proscribe cold Water in Continued Fevers & even

and even cool it with Ice. This is not safe in the Northern Climates where Fevers are generally attended with Inflammatory Symptoms in which Case this Practice will prove hurtful, In low, Nervous & Malignant Fevers it is useful & is very agreable and refreshing to the Patient & it acts as a Stimulant and Diaphoretic. Wherever there are topical Inflamation its Use is attended with Disadvantage and is ever very dangerous-

Warm Water appears to have contrary Effects from Cold Water. Taken into the Stomach it acts as a Diluent & Solvent & expedites the Evacuation of its Contents; it relaxes the Stomach & in Consequence of this the whole System, hence proves Diaphoretic; it also in the Intestines acts as a Diluent & Solvent. Cold & Warm Water do not differ in their Effects when they have arrived thus far as they have each by this Time acquired the same Temperature with the Body. It dilutes the viscid Matter in the Intestines; prevents Obstruction of the Mesenteric Glands & other Chiliferous Vessels; by its Bulk it increases the peristaltic Motion & promotes the Secretions of Stool & Urine and hence it will have great Effect in Scrophulous Disorders.

Water alone may have this particular Effect, & it is from this that the Mineral and Medicated Waters are of such great Use in curing Scrophulous Disorders. It dilutes & attenuates the viscid stagnating Humors, increases the action of the Vessels & thus answers every Indication

It is however necessary to take it in large Quantities, since the lower Class of People who swallow it in Pints over an Quarts of Mineral Waters find Advantages which the rich & more delicate seldom Experience. Hoffman & many other Physicians have highly extolled the Virtues of Water & have even considered it as an universal Panacea & truly it deserves this Name more than any other Substance which have been from Time to Time dignified with this Title. I have frequently recommended a Tumbler of Cold Water to be taken early in the Morning, daily, for Persons troubled with Indigestions, Flatulencies & Hypochondriac Diseases; likewise to Persons subject to Cramps & Spasms of the Stomach, in a Word, in Cases of Dyspepsia. At first it is disagreeable, but they soon become used to it & at last it is so very agreeable that they cannot do without it. It exerts considerable Effects in the Blood Vessels, for by increasing the Quantity of Fluids it stimulates the Heart & Arterial System accelerates the Circulation & increases the Secretions. It prevents Accumulation & Plethora & thus conduces to the Health of the Body. Pure Water when taken in large Quantities produces considerable Effects upon the System & will frequently cure the most obstinate Disorders. The Hot Wells of Bristol are a Proof of this. The Bristol Water is the purest & simplest we know of & is recommended in a Variety of Disorders. The Warm Springs near the Potowmac in Virginia are of the same Nature. From a superficial Examination of a Bottle that was brought here I found it to be very pure & to contain a considerable Quantity of Air, I therefore conclude it will prove a most excellent Solvent & extremely light & agreeable to the Stomach. On this Principle

I have recommended them to several Gentlemen who were troubled with Indigestions arising from obstinate affections of the Stomach, who were greatly benefited by them and all agreed that the Water was pleasant & that it passed off remarkably quick by Perspiration and Urine. Upon first drinking them they generally proved Cathartic; they drank from 4 to 6 Quarts a Day. It is much to be wished that some Person qualified for the Task would make an accurate Analysis of the Waters, at the Spring to determine the Nature & Quality of them, that they might be more generally recommended –

The different kinds of Alkalis have been considered as Attenuants from their Effects internally and their known Qualities of dissolving & attenuating the Blood out of the Body & we find them prescribed as Attenuants even at this Time. There are several circumstances which concur to render their Effects doubtful & even very improbable. 1st The Alkali meets with an Acid in the Stomach by which it is decomposed & neutralized & changed from its original Properties – 2d It is never any they should be employed in a Caustic, concentrated State to act as a Solvent. This is absolutely impossible when they are taken by the Mouth for the Quantity of Fluids they meet with in the Primæ Viæ will considerably dilute them & the Air which is always present there will render them mild. This renders it extremely doubtful whether they can act in the Manner supposed. The long Use of them may have considerable

considerable Effects on the Solids which finally may be extended to the Fluids —

Quick-Lime has been considered as an attenuant upon the same Principles as Alkalis but this seems highly improbable as we find it may be used with advantage where Attenuants would be most improper, e.g. in Calculous complaints of the Kidneys & Bladder, where it appears to act as the Urea Urei. In Chronic Dysenteries it is used with advantage & when there is Griping it is necessary to add Half Milk; it will be proper to give from time to time a Dose of Rhubarb & Calomel & as these Dysenteries frequently owe their Cause to an Ulcer in the Alimentary Canal this Method is altogether necessary. Morton recommends Lime Water in other internal Ulcers were those of the Lungs. Combined with Milk it is used in Scrofulous Ulcers & Swellings. All Physicians who have recommended it for this Purpose caution against using it freely when it occasions Costiveness it enervates the System. In these Cases it will be particularly necessary to combine it with an equal & even greater Quantity of Milk. We should begin with small Doses & give from ½ to 3 Ounces a Day at first increase the Dose gradually until the Patient takes one or two Pints a Day. It is recom-

recommended externally in Eruptions & Ulcers of the Skin Fistula &c by Hippocrates - It has cured the most obstinate of what are called Scorbutic Ulcers by Drinking & fomenting - Mixed with the Oil of Almonds or Olives it is an useful Application to Scalds & Burns - Castile Soap & Lixivium of Lime are applied to Scrophulous Tumors to discuss or maturate them. Lime Water in which Some Sublimate has been dissolved gives us the Aqua Phagidenica which is a good Gargle to wash Venereal Ulcers in the Mouth & Fauces. With Copper or Roman Vitriol gives us the Aqua Saphanina which is an useful Application in weak Sore Eyes, particularly in Old People. Combined with Sach: Saturni it is of Service in Impetiginous Itchy Eruptions on the Skin. Dr Heberden denies that the Exhalations from Lime in new built Houses have the Effects ascribed to them.

Soaps. By this we mean a Combination of alkalis with expressed Oils or Animal Fats. Many other Substances have been improperly called Saponaceous. Soap has been very often employed in Medicine but it is difficult to explain in every Case upon what Foundation. Soap dissolved in Water is esteemed more powerful than simple Water when Poison has been swallowed on account of its detergent Solvent Qualities - Thus

There is another Reason for preferring it when Corrosive Sublimate has been swallowed, the Alkali will decompose the Sublimate & render it inert. 'Tis upon this Principle that Sal Tartari has of late been recommended where Sublimate has been inadvertently taken in too large Quantities, the alkali ~~destroying~~ uniting with the Acid of the Sublimate renders this harmless. Soap dissolved in Milk it is one of the most effectual Applications for Swellings & Obstructions in the Breasts arising from stagnating & coagulating Milk. It is likewise useful as an Injection in Fistulous Sores of the Breasts arising from the same Cause. Plaisters & the spirituous Solution of Soap are useful in Chronic Rheumatic Pains & other deep seated Pains in the Joints. See D^r Cullen's Mat: Med: for the Remainder.

Inspissantia.

These are opposed to Attenuantia. They are said to be such Medicines as restore the proper Degree of Consistence to the Fluids when these are too thin & dissolved. Whether any Medicine has these Effects is to me extremely doubtful. Even the most viscid and glutinous Substances undergo a Fermentation in the Stomach by which they are much changed. Under this Head Authors universally rank

Demulcents. These are such Substances

as defend the Parts from the Irritation of thin Acrid Fluids. This Irritation occurs in Catarrh & Dysentery. Gum Arabeii is one of the purest & most simple Mucilages. It is proper wherever the natural Mucus is abraded or a thin acrid Defluction in any Part takes Place. Hence it is used in the Cardialgia Hemoptoe, Diarrhœa & Dysentery, Catarrh & in the Ardor Urinæ. In this Case it would be proper to combine with it the Oil of Almonds or olives, especially since Mr. French an Apothecary in London has taught us that by the Intervention of Gum Arabic Oil may be united with Water by Trituration or simple Agitation.

Gum Tragacanth agrees with the former in every Respect & may be used in the same Intentions. It will be proper to allow Persons who are attacked with Hæmorrhages to drink plentifully of Some of these Substances dissolved in Water as these are frequently owing to or at least attended with Irritation. D.r Hasselquist gives us an Instance of an Hundred Persons, shut up in a Fortress, besieged by an Enemy who were totally unprovided with Provisions supporting life by suffering Some Gum Acacia to melt in their Mouths & then swallowing it. This took off the Irritation arising from Hunger & they lived for

for two Months upon Nothing else. ℥ss of Gum Arabic dissolved in a Quart of Barley Water affords an excellent Drink in Strangury arising from Blisters or taking Cantharides.

Tacamahaca is more nutritious & tenacious but is less proper in Dysenteries & other Diseases where there is a Tendency to Putrefaction.

Marsh Mallows, Linseed, Bran & other sweet mucilaginous Substances agree so much with Milk in Virtue that they do not require a particular Description.

Antacida. Physicians from observing an acid constantly present in the Stomach, supposed that this Acid might be carried & mixed with the Blood & that many Disorders were owing to an acid Acrimony. But this is not the. There are no Facts which make it even probable that an acid prevails beyond the Stomach & Intestines. When the acid is carried into the Intestines it meets with the Bile which counteracts the Acidity. When it is mixed with the Blood which is of a putrefacient Nature any Acidity of the Chyle will soon be overcome. This is confirmed by attending to what happens in Persons who die of Hunger. Tho' they have subsisted on Vegetable Food when they come to want Nourishment they are attacked by a

Fever of the putrid Kind & die evidently of Putridity.

Acidity may occur in the Stomach to a morbid Degree from various Causes. The Medicines which correct this Acidity are called Absorbents as Magnesia Oyster Shells, Crabs Eyes, Coral &c. They differ but little. They form a Neutral Salt with the Acid which proves Laxative. They do not prevent a future Generation of Acid. This must be done by Medicines which restore the Tone & Strength of the Stomach.

Errhina or Sternutatories. These are such Medicines as stimulate the Membrane of the Nostrils & produce a Discharge of Mucus. Sternutatories were formerly in much greater Use that at present when considerable Effects were attributed to them. They are not now so much confided in. They may prove useful in local, partial, external Affections of the Head. The Substances most generally employed are the Turpeth Mineral which is the most powerful, Asarum or Asara Bacca, the next in Strength and Tobacco which is in very common Use. They are all useful in Rheumatic Affections of the Teeth Ears, Head & Face & in Inflamations of the Eyes. They prove useful by exciting a Stimulus in a Part different from the one affected by which a greater Quantity of Fluids is determined to the Part to which is applied & the Determination to the affected Part is taken off. ~~The Effects of~~ Snuffing Tobacco is only

in the Beginning for by long use the Sensibility of the Parts to its Stimulus is diminished & its Effects are lessened & even destroyed. The Effects of Custom are displayed in the Use of Tobacco thro' all its Varieties. Writers upon Ethics have from this drawn a Conclusion that the Rich & the Poor are upon a Level that the Rich by Time lose all their Relish for their Possessions & the Poor are not conscious of their Wants. The Application of this to Medicine if not more important is at least more perceptible & obvious. It shows that the most acrid Substances when the System has been long used to them may lose their Effects on it & the most active Medicines may by long continued Use be rendered habitual Poison in King Mithridates refused to do its usual Office, because he had been used to take it lest he should be destroyed by it. See Cullen's M. M. —

Expectorantia. By this Termme mean such Medicines as are intended to promote the Discharge of Mucus from the Lungs — which are often denominated Pectorals. Innumerable & very different Substances are employed for this Purpose. They may all be referred under two Heads. The first promote this as they do any other Secretion, by stimulating the Organs of Excretion & Secretion. The second, when the Secretion & Excretion are diminished or suppressed by Spasm are such Medicines as produce or

or increase it by taking off the Spasm. All Expectorants are therefore either Stimulant or Antispasmodic. Of the former the Effects are precarious as the Discharge from the Lungs can scarcely be considered to take away excrementitious matters from the Body, as the Lungs are not one of the Emunctories, nor can we determine the Action of these to the Breast in Preference to any other Part.

Ground Ivy, Hyssop & Pennyroyal act by stimulating the Mucous Glands in the Breast but their Effects are precarious - Elecampane is more acrid than the former & has been considered a better Pectoral -

Squills are still more acrid & stimulating They act as Emetic, Purgative & Diuretic. The Preparations most commonly used are the Vinegar & Oxymel the latter of which is the most disagreable & nauseous. The Vinegar sweetned with Sugar answers every Purpose of the Oxymel & is much more agreable. Squills are generally given in every Complaint of the Breast. Diseases of the Breast & Lungs may be referred under three Heads. As they arise

1st from Inflamation. 2d Obstruction 3d Spasm. all Complaints of the Breast may I think be referred under one or other of these Heads. In all Expectoration proves the natural Solution of

of the Disease & it is the Business of the Physician to know how this may be best promoted & as the Causes are different it is evident that the Cure must vary. Instances of the Inflammatory Diseases of the Lungs we have in the Peripneumony, Pleurisy & Consumption. Here the Cure must depend on the Antiphlogistic Regimen & Method, that is, Bleeding &c. Pectorals have seldom a Place in our Indications tho' they are too often employed. for here the Expectoration is a consequence of the Inflamation & we cannot bring it on before the Inflamation is lessened. The best Method of promoting Expectoration is to keep the Fever moderate & to drink plentifully of mild Liquids. If any Medicines are to be employed none will favor Expectoration better than Antim.t Wine or small Doses of Thcac: In the Consumption a similar Method is to be pursued; small but frequent Bleedings, gentle Emetics & above all a Milk & Vegetable Diet with moderate Exercise will do more Service than all the Pectorals ever invented; the Lives of many have been saved by these Methods & thousands have been destroyed by a contrary Treatment. These Pectorals whether the natural or artificial Balsams, Syrup or oily Emulsions prove hurtful by their acrid stimulating Qualities or they destroy the Tone of the Stomach by loading it with indigestible Substances. These may occasionally palliate the Symptoms but they can never

contribute any thing to the cure - they ought not to be used by a Physician, at least until he is convinced of the Impossibility of any other Medicine affording Relief. In the Consumption as well as other Diseases attended with Coughing there is frequently a Symptom which is very troublesome & which considerably aggravates the Disease - This is a constant Tickling in the Throat producing an incessant Cough - This may be removed by mucilaginous & sweet Substances held in the Mouth - they palliate the Symptom but do not contribute much to the cure. The best method I know is to hold a Lump of Gum Arabic in the Mouth that it dissolves gradually by which its Effects will be extended into the Trachea.

2d. Obstructions of the Lungs are of three kinds viz. Scrophulous, Tuberculous & Mucous. The Scrophulous occurs in Persons liable to Consumptions. The Scrophula may have its Seat in the Lungs as well as in any other Part in the System; it can only be known by the general Habit of Body; it is to be treated in the same Manner as Scrophula in any other Part by Mercurials, Mineral Waters & Hemlock. We have Instances of these Obstructions being cured by each of these Medicines; the Cicuta I have myself known useful. The Tussilago or Coltsfoot is recommended by Dr. Fuller in the Scrophula & Dr. Fuller subscribes to

to its Usefulness. Dr Fuller likewise recommends it in Consumptive Habits. From his Testimony it deserves to be employed in Scrophulous Obstructions of the Lungs & I should have frequently employed it but that it does not grow in this Country & it is said to be more effectual when fresh than when dry. Tubercles are the most general & frequent Cause & Foundation of Consumption & they are the most difficultly cured. Of Obstructions from Mucus we have an Instance in the Humoral Asthma of those. Diseases which are said to arise from Pituita Frigida. If acrid stimulating Pitorals are ever proper it is in Diseases owing to Pituita Frigida - Here the natural & artificial Balsams, Squills & Olecampane may be useful to excite the action of the Vessels & enable them to throw off the Mucus which choaks up the Bronchia. Tho' Complaints are seldom attended with Fever their Antispasmodics & Stimulants are the best Remedies, as Asafoetida, Gum Ammo: Garlic &c. as recommended in the Catarrhus Senilis. They should be taken in large Quantities and continued for a considerable Time -

3? Diseases of the Breast are owing to Spasm. Here Antispasmodics only can be used with advantage. Opium is the chief Remedy on which we depend. On the Solution of the Spasm Expectoration takes Place. Under the Article of Opium I told you that by checking Expectoration it might lay the Foundation for obstinate Obstructions

Obstructions in the Lungs. When we use Opium therefore it will be necessary to combine Squills or some Antimonial Preparation with it to obviate this Tendency, when by Mean Antimony or Squills we obtain all the good Effects of the Opium without its Disadvantages Z.i. of the Vinegar of Squills with Z iv of Simple Cinnamon or Peppermint Water with Gutt: LX Laud: will form an agreable & efficacious Mixture of which a Table Spoonful may be taken every 2 Hours. If the Squills should prove too nauseous we may substitute Antimonial or Ipecac: Wine. This Mixture will be of singular use in the last Stages of Peripneumonies & Pleurisies as also in the last Stage of Consumption when it is in a Manner our only Resource as it safes without shortening the Days of our Patient. By attending to these Circumstances you will be enabled to form an Idea of the use of Expectorants & know when they are useful & proper.

Lecture 31st.

Sialagogas.

These are such Substances as ~~[illegible]~~ increase the Discharge of Saliva from the Glands in the Mouth. All acrid Substances when held in the Mouth will stimulate the Glands to more copious Secretion & Excretion of the Saliva. No Medicine taken internally mixed with the Mass of Blood except Mercury will have this Effect constantly. Quick Silver has had more Attention paid to it than all the other Metallic Substances put together. Some suppose that Mercury acts chiefly on the Fluids, but more accurate Observations demonstrate that it acts upon the Solids & that its Effects are owing to its stimulating Quality. Many Physicians suppose that Mercury prepares the Fluids to pass off by particular Secretions, but its action may be explained upon its stimulating Power. During the most copious use of Mercury internally, Observations do not show that the Fluids are altered from their natural State, at least not more than from any other Inflammatory Stimulus. Instead of the Blood losing its Consistence it shows more Marks of Viscidity & Inflammatory Lentor. Mercury is a more general Stimulus than any other Metal. It acts upon the Stomach, Intestines, Urinary Organs, the Excretories of Ulcers & many other Parts of the System probably where its Effects are

not so discernible. The principal Objects of its Stimulus are the Salivary Glands. This Effect is peculiar to it & no other Medicine, hitherto at least, has been discovered which passes off by or stimulates this Organ. As this is peculiar to Mercury so is it its principal Action and it has been the great aim of Physicians to obtain its Action with equal certainly in some other Way. Mercury acts upon the Stomach when the Preparation is very acrid & more soluble, but it is necessary it should be taken in a large Dose. It operates upon the Intestines when the Preparation is mild from a contrary Quality i,e, from not irritating the Stomach & being more insoluble; but also it must be taken in considerable Doses. Either the acrid or mild Preparations when taken in small Doses are carried into the Mass of Blood. If the Preparation is very acrid it proves a general Stimulus to the System & stimulates the common Excitories of the Body & so passes off by Perspiration or Urine. But if the Preparation is a mild one or an acrid one taken in small Doses and repeated at considerable Intervals it is accumulated in the System & never fails to stimulate the Salivary Glands. This Effect does not depend on Specific Gravity or any Mechanical Quality but from a Chemical Quality which disposes it to unite with one Portion of our Fluids sooner than another. There is no Foundation to suppose

that it prepares the Blood to be carried off by the Salivary Glands. If it gives Fluidity to the Blood why does it pass off by the Salivary Glands rather than by the other Emunctories? Why it affects the Salivary Glands in Preference to the other Parts is not very evident; it appears to depend on a particular Chemical Relation. It does not stimulate the Glands by any specific Property but by the same Principle that it stimulates other Parts. It acts on the Salivary Glands only by being accumulated in them & stimulating them in the same Manner that any acrid Substance would do that could arrive at them. For a Proof of this Mercury applied to the Salivary Glands externally produces a Salivation & it effects are more sudden & stronger than when taken internally this is evident in Mercurial Vomits. ℔ vj. or ℔ viij. of Turpeth Mineral will vomit & infallibly induce a Salivation & that immediately by stimulating the Salivary Glands in passing over the Tongue in the same Manner that Arsenic inflames the Oesophagus, Fauces, Tongue &c. as it passes over them. The Saliva has a peculiar Odor. This depends on the Increase of the Secretion; for there is no Instance of any Secretion being increased without a change happening in the secreted Fluid; this Change is produced in the Secretory Organ & does not depend on any Affection of the whole Mass of Fluids.

We

We find that when a Salivation comes on spontaneously when we are sure no Mercury has been taken the Saliva has the same Fetor & Appearances as if Mercury had been given. Mercury in the State of Vapor has considerable action on the Nervous System & produces Torpor Tremor & Palsy whether in any State it is free from this Effects is doubtful This Property of Mercury in exciting Palsy is much more powerful in a State of Vapor as is evident from its Effects on Miners & Quicksilver who are much exposed to the Fumes of Mercury. When taken into the Body in its saline State it only exerts its stimulant Effects & seldom or never is narcotic—

We shall now consider the Diseases in which Mercury is proper & first of the Lues Venerea where Mercury is the Sovereign Remedy—

The Lues Venerea is properly divided into two Species viz- The Gonorrhea & Syphilis or confirmed Pox. These require different Methods of Treatment.

In the Gonorrhea it is evident the Disease is local & totally confined to the Glans Penis & never except in extraordinary Cases extends to the Prostate Gland or Neck of the Bladder & appears to be a topical Inflamation without Ulceration— This sufficiently explains every Symptom

2nd

In this View of the Matter it appears that the internal Use of Mercury can contribute little or nothing to the Cure. We may add Calomel to our Purgatives but it will have little or no immediate Effect in curing the Disease. It may have some Tendency to diminish the Inflamation as we find it to diminish Inflamation in every other Part. The Cure of the Disorder is more simple and easy now than it was even a few Years ago when the Nature of it was not so well understood. This we shall now relate after giving a more speedy Method than has usually been pursued.

Mr. Fordyce in making Experiments with the Caustic alkali found that it dissolved the Mucus of our Body more speedily than any other Substance, he therefore naturally concluded that if a weak Solution of it was injected into the Urethra in the Beginning of a Gonorrhœa the Disorder might be cured radically before it arrived at any considerable Height. He soon had an Opportunity of trying it, he injected a weak Solution of Sal Tart: into the Urethra & by this cured the Disease radically. Many Gentlemen at Edinburgh repeated the Experiment afterwards voluntarily received the Injection & they never found it fail. It ought to be used in the first Appearance of the Symptoms before the Inflamation has arrived at any Height. It used when the Inflamation is

is considerable it occasions great Pain & agony - the Solution should be weak enough to be easily borne upon the Tongue. I shall now deliver the Method I generally pursue in the Treatment of Gonorrhœa -

I order the Antiphlogistic Regimen & Course; if the Patient is strong & plethoric we order Bleeding; & it will be proper to keep him on a low Vegetable Diet with Milks - keep the Bowels open with gentle Laxatives. We order him to inject into the Urethra Oil of Olives, or what I have found to answer better than anything else, an Ounce of Mercurial Ointment without Turpentine or any acrid Substance, dissolved in ℥viij of Oil of Olives & a Portion of this may be injected into the Urethra Morning & Evening - all this tend to lessen Inflamation. It is improper to give acrid Purgatives as they irritate the Rectum which is communicated to the Urethra. The best way to keep the Bowells is by a cooling Diet or mild Purgatives. ℥j of Glauber's Salt may be taken 2 or 3 Times a Day - nothing is more proper than Castor Oil or some Purgatives that act without Irritation. Warm Fomentations or immersing the Penis in warm Water 2 or 3 Times a Day will also contribute to lessen the Inflamation. When the Ardor Urinæ is so great that the Patient cannot make Water, Morgagni advises to keep the Penis immersed in Warm Water & to let the Urine pass off gradually. Warm Fomentations

tend

tend to allevieate the Chordee. topical Bludings on the Penis or in the Perinæum will be of singular Service. When we use sweet Oil for Injections we should be carefull what kind we employ. Sweet Oil by age becomes aurid & rancid & if used in this State will heighten the Inflamation When this Method is pursued the Disease will scarcely exceed a Fortnight. When the Inflammatory Symptoms are thus relieved & the Discharge is a thin white pellucid Mucus, this may be checked by moderately astringent Injections, such as a weak Solution of white Vitriol. Ij or 2ß may be dissolved in 6 or 8 Ounces of Water. To lessen the acrimony of the Urine during the Inflammatory Stage the Patient should drink plentifully of mild dilluent Liquids, such as Milk & Water, Emulsions of Gum Arabic, Marshmallows Linseed &c. - These dilute the acrimony of the Urine & diminish the Scalding. The Chordee may likewise be relieved by keeping the Penis confined during Sleep & taking an Anodyne at Night. In my own Practice I have for some Years intirely dropped the use of Injections and have trusted the Cure to small & repeated Doses of Gum Arabic with the Antiphlogistic Regimen & an Anodyne at Night.

In Disorders of the Urinary Passages where Injections have been recommended & used for the Cure, I suspected them to be the Cause of Caruncles, Constrictions & Gleets - this induced me to lay them aside & I did this the more readily as I found the Disease might be cured as effectually without them. If you look into Sydenham and the best Authors you will find they entertain much the same Sentiments respecting it with myself. I have lately had a Case which strongly confirms this -

a Gentleman who had frequently been cured of a Gonorrhaa by injecting a Solution of Corrosive Sublimate in Water into the Urethra upon again receiving the Infection had Recourse to the same Application & it apparently proved Mutual in relieving the Disorder. After a few Days he was attacked with a Fever with a painful Sensation in the lower Part of the Abdomen with slight Obstruction in the Urinary Passages. I suspected the Injection to have been the Cause of all this Mischief ordered Bleeding with Antimonials & Calomel which in a few Days relieved the Fever; but the Gonorrhoea returned with as much Violence as ever, the Uneasiness is not even yet removed She will probably experience ill Effects from it as long as she lives. —

A confirmed Lues or Pox appears in various Shapes. It has often lurked in the System for many years without shewing its Effects. We have Instances of Children being afflicted with it on whom it was intailed by their Parents while these did not apparently suffer from it. A Gentleman had been 12 Years married when he was seized with an Ulcer in the Neck of the Bladder. The Patient had the Venereal Disease before Marriage but had not been connected with any Woman but his Wife since that Time. The Disease was nevertheless considered as Venereal and was treated as such & was cured. Here we see that tho' the Disease had lurked in his Constitution for 12 Years the Ulcer in the Neck of the Bladder was considered as a Venereal Complaint & cured by treating as such When the Disease appears with Buboes, Shots &

and Efflorescence there is little Difficulty in distinguishing it_ The following is in general the Course of the Disease—

Bubos appear in the conglobate Glands, severe Pains are felt in the Head & Joints of the Extremeties, with little or no remission or intermission; these are always worse when the Patient is laid in Bed & remit on sitting up; the Mind is dejected, the Strength impaired; Pustules appear on the Skin particularly of the Face & Fore-head & the Scabs are of a yellow Colour_ In Procefs of Time Exostoses are formed in the Periosteum particularly of the Bones of the Head Legs & Arms; the affected Bones sometimes become carious; Phagedenic Ulcers attack the Nose, Throat & Palate; the Venereal Virus is discharged from the Eyes Ears Nose & Lungs; there is a Loss of Sight Hardness of Hearing & fetid Breath_ all the Animal and vital Functions are debilitated_ an Hectic Fever gradually wastes the Patient until Death closes the Scene—

Mercury in this Disease is the Sovereign Remedy & it is only about the best Method of administering it that Physicians have disputed. Upon the whole the most simple Preparations are the mildest & answer the Purpose best provided they are well triturated. By being mixed with Acids it becomes more acrid & stimulating but does not exert any greater Virtues than the Quicksilver Pill or Ointment. The acrid Preparations will sometimes sooner relieve the Disease & more speedily effect a Cure. If the Disease is situated in the external

* R. Mere: Corof: Sabl: ℥j ——— ℥j

Spt: Rectificat: permint: ex Hordeo vel Secali ——— } ℥cxx. fiat sectus

external Parts of the Body the acrid Preparations are most proper & will answer, ~~best~~ as they stimulate the different Excretories & are thus applied to the Parts most affected. In these Cases & wherever we wish to avoid a Salivation Van Swieten's Solution of Sublimate is most proper.*
But in internal Affections & in Persons disposed to Consumption the mild Preparations are most proper as they remain longer in the System. The Salivation from Sublimate is more troublesome than from the milder Preparations; the Inflamation in the Mouth continues longer & is more violent & alarming. I generally combine about ¼ Grain Sublimate with ½ Grain of Opium which may be formed into a Pill & repeated 2 or 3 Times a Day. But I have known even this to affect the Mouth especially in cold Weather. The Caustic Alkali decomposes Sublimate, this therefore is the best Remedy when Sublimate has been taken in too large a Quantity - a strong Ley of Ashes will answer equally well when this is not at Hand.
In the Ed: Med: Commet: we have several Instances of Persons being saved, who had swallowed Sublimate, by Means of the Caustic Alkali. This gives us a Caution in our Prescriptions for when we combine any Alkali with our Sublimate it destroys its Effects in Proportion to the Quantity of Alkali. We should always avoid Salivation if possible - This is now the universal Opinion of the best Physicians. Salivation is only employed because it is the most certain Criterion of the Mercury having taken Effect - We can produce the same Effects without the disagreable Circumstances

attending Salivation. This may be done if we give the mild Preparations in small Doses, keep the Body & Chamber Warm, drink plentifully of the Decoction of the Woods or other warm diluting Drinks & using Warm Bathing, particularly in Summer. M. Plunck of Vienna gives us a Preparation of Mercury with Gum arabic which he tells us never salivates but I have seen it salivate several, tho' it is longer in producing this Effect than some other Preparations of Mercury. This Preparation however seldom salivates if the other Directions are adhered to.

If there are Buboes they are to be discussed by Mercurial Friction applied about half an Inch below the Swelling. Some advise us not to discuss Buboes but to let them come to Suppuration as they think the Matter will be evacuated more effectually & there will be less danger of it being communicated to the Blood. But this is erroneous - there is certainly more Danger of Absorption after Matter is formed than if it is destroyed in the Beginning before it comes to Suppuration.

Tho Mercury is the principal Remedy for the Venereal Disease, it is not the only one. Kennedy's Decoction or the Lisbon Diet Drink I told you has been found to cure it effectually & speedily. There are certain Plants that grow in this Country which the Indians employ for the Cure of the Venereal Disease. These were communicated by the Indians to Sir W. Johnston & he communi-
cated

communicated them to Mr. Kalm a Swedish Gentleman who was sent some Years ago into this Country by the Academy of Sciences at Stockholm for the Improvment of Natural Knowledge. Mr. Kalm discribes these Plants in the Swedish Trasactions. The principal one appears to be a Species of Lobelia & is denominated by Linnaeus the Lobelia Syphilitica & is said to grow in every Part of this Country. Mr. Kalm also discribes the Method of using them. They take the Roots of 4 or 6 Plants wash & drain them well / some prefer the fresh, some the dry / they boil these Roots in 3 Quarts of Water of which the Patient is to drink as much every Morning as he pleases - he is to use it for his common Drink. It is to be taken in such Quantities as not to prove purgative - the Patient must not be indulged in the Use of Spiritious Liquors; he must live chiefly on Vegtables with now & then a little Meat. This Course is to be continued 2 or 3 Weeks in which Time the Disease will generally be cured - he is to wash the Ulcers, if any, with the same Decoction. If the Disease is very virulent they add some of the Roots of the wild Ranunculus; this vomits & purges & is generally effectual Mr. Kalm tells us that he met with a Person that had been cured by an Old Indian Woman & which she had by him some of the Leaves of the Plant with which the Cure had been performed - these Mr. Kalm found to be the Lobelia Syphilitica.

From this Account we see that there are Vegetables of at least equal Efficacy without the disagreable and unfriendly Effects of Mercury in curing this Disease

We

We know that the Pox is no uncommon Complaint among the Indians - it is equally certain that they have no Mercury to cure it & yet they often cure White People who put themselves under their Care. This seems to be confirmed by Kalm's Opinion. It has long been doubted whether any Vegetable Substances will cure the Disease - The Lisbon Diet Drinks & Kalm's ~~Gold~~ tend to show that they will - A Vegetable was sent to me last Summer by Dr. Golding of the Island of Barbadoes with an Account that in every Stage of the Venereal Disease it was an effectual Remedy It was tried in one or two Cases in the Penn.a Hospital while Dr. Rush attended there & apparently with good Effects. The Plant appears to be a Species of the Euphorbia all the Species of Euphorbia appear to be active Vegetables There are some Species grow here which in all Probability possess similar Virtues. This seems to confirm the former Opinion that this Disease may be cured by Vegetables as well as Mercury —

Mercurial Ointment has been recommended for the cure of Hydrophobia from the Bite of a Mad Dog Default & Choisel, an Apothecary to the Religious of that Order & a Jesuit, both recommend it for the Bite of a Mad Dog. The latter assures us that he had known no less than 300 cured by this alone. Its Use is confirmed by the celebrated Sauvage of Montpelier. We can scarcely doubt but that the internal & external Use of Mercury may prove useful in preventing this dangerous Disease from coming on. The Mercury should be used

used as soon as the Bite is received & continued till a Salivation comes on; after ~~the~~ the Hydrophobia has come on there is generally too short a Time for any thing effectual to be done. It is seldom cured after it has once taken Place. I have had but one Opportunity of observing its Effects Some Years ago a Child was bitten by a Dog said to be Mad the Sore was rubbed every Day with Mercurial Ointment for a Fortnight when the Sore healed up & the Child continued well. I am far from being convinced of the Efficacy of Mercury in this Disease from this Case as I am by no Means certain the Dog was Mad he being killed immediately after having bitten the Child, together with Several other Dogs which he had bitten. From some late Observations of Dr. Fothergill it appears that neither this nor any other Remedy is certain & infallible in the Cure of Hydrophobia. A Gentleman lately dispensed a Powder under the Name of the Ormskirk Remedy which was said to be effectual for the Bite of a Mad Dog & maintained an undoubted Reputation until unfortunately a Gentleman of Eminence in London was bit by a Mad Cat & died of the Hydrophobia notwithstanding Ormskirk Remedy immediately after being bit.

Mercury is likewise employed in a Number of other Diseases. It is used in all Kinds of Obstructions & Sores. When on Cancers I told you it might be useful in Scrophulous Cancers, but that it is hurtful in genuine

genuine Cancers & Schirri. It may be used with Advantage in Schirrous Obstructions of the Viscera & Diseases arising from this Cause; hence it has lately been used with Singular Success in Dropsies which are frequently owing to these Obstructions. It is useful in old foul Ulcers & Sores where by its Stimulus it produces that Degree of Inflamation which is necessary for the Formation of good Pus. Of its Use in killing Worms we shall treat under the Head of Anthelmintics—

Crude Mercury has been recommended in certain Complains, particularly in violent Obstructions of the Bowels. Five 2 or 3 Ounces are directed to be taken at a Time until the Patient has taken a Pound or more. But this is a dangerous Experiment as a Volvulus is often the Cause of this Complaint— that is when the Superior Part of the Intestine is received into the inferior, when the Pressure of any Thing above would increase the Disorder, & if too great a Quantity of Mercury is taken it might even occasion a Rupture of the Intestines. A Case should be desperate indeed before we have Recourse to such dangerous Experiments. When the Obstruction is owing to hardened Faces Lenient Purges & emollient Glysters will most effectually remove it.

The

The Yaws are a Disorder that resembles the Venereal Disease tho they are not the true Lues. It is common on the Coasts of Africa & the Highlands of Scotland. The Patient complains of a pungent Pain in the Throat & Difficulty of swallowing; his Mouth is dry & his Breath has a peculiar Fetor; glandular Swellings appear under the Ears & lower Jaw - these Symptoms continue several Months; Pustules about the Size of a Pea appear ~~on~~ the Root of the Tongue; Ulcers are formed in the Throat, over the whole Mouth & Palate; the Eyes & Ears appear red & inflamed; the Ears are affected with Pain & a continual Noise; Eruptions appear in the Back, Loins, Groin & Genitals, thereby Degenerate together & form one large foul Ulcer with violent itching. All these Symptoms do not occur in the same Person - in some the Mouth & Fauces only are affected; in others the Groin Private Parts and Loins; some are tormented with nocturnal Pains in the Bones & even Exostoses & Caries. This shows the great Uncertainty in this Disease. It is sometimes more Infectious than the Venereal Disease and there are Instances of Persons catching from drinking out of the same Cup ~~&~~ with infected Persons; Tho' there are Instances where 2 or 3 of a Family have escaped while all the rest were infected with it.

It requires nearly the same Method of Cure as the Pox by treating it with Mercury & the Decoction of the Wood. It is in general not so vicious nor so

nor so difficult to cure as the Pox; but it is apt to return in a few Months when however it is seldom so bad as at first. — Lecture 32d.

Mercury is an effectual Remedy for the Fevers. This Disease is particularly incident to Children. It never attacks Children above 12 Years of Age & seldom those above 6 or 8. It attacks those chiefly who apparently enjoy the best State of Health & Spirits & of a grossfull Habit of Body. It is slow in its Attacks — The Child droops and appears drowsy & heavy & does not join in its usual childish Amusements; a little Hoarsness generally attends by which the Parents are deceived & believe that the Child has caught Cold, but it has no Cough; at Times the Pulse is quick with momentary Flushings of Heat; the Child feels no Pain except a dull Sensation at the Head of the Trachea. These Symptoms continue for 2 or 3 Days when the Disease puts on a more alarming Appearance — The Breathing now becomes more quick & laborious; the Muscles of the Abdomen are contracted with the utmost Force in order to dilate the Thorax; the Voice is either intirely lost or acquires a peculiar Shrillness like the Crowing of a Cock; the Face is overspread with a deadly Paleness sometimes of a livid Colour; the Pulse becomes very quick & small & the Child is in the most eminent Danger; a Sweat breaks out upon the Face & Neck & sometimes over the whole Body. During all this Time the Child appears

appears easy, owing probably to the Absence of Pain. Tho' the Symptoms are so very alarming they sometimes remit & the Child appears better; but this only a short Truce; the Symptoms soon return with redoubled Violence & unless the Child is relieved it will soon be suffocated. But during this Remission the Child is not intirely free from the Disease; the Difficulty of Breathing and Wheezing still continues owing to the Obstructions in the Trachea; the Voice neither does recover its Tone the Disease should never be considered as cured until the Wheezing is gone off intirely & the ordinary Tone of Voice returns. There are other Symptoms which are Adventitious & are only occasionally present — The Face is sometimes red or swelled; the Patient is sometimes thirsty the Urine is with or without Sediment; the Child sometimes has a Disposition to puke. —

The Appearances upon Dissection after Death demonstrate that there is too large a Quantity of Mucus collected in the Trachea & is sometimes Lardaced into a tough Membrane. This appear to be the immediate Cause of the Death of the Patient. In one Case this Membrane was found to extend a considerable Way within the Bronchiæ. Dr. Francis Home has given us the Dissection of 9 Patients who were carried off by this Disease & the Appearances were the same in all if we make Allowance for the different Forms the Disease had existed in the different Persons. In some the Mucus was poured out without any Change;

in others it was hardened into a Membrane & in others purulent Matter had begun to be formed. I have had two Opportunities of observing the Appearance after Death. One in a Boy 4 Years old who had been attacked with the Disease 2 or 3 Days before. Upon opening the Trachea we discovered a ~~Thin~~ thick white Membrane which extended within the Bronchiæ. This adhered so firmly at the lower Part that it could not be separated without Laceration & in other Parts it was intirely distinct & loose from the Membrane lining the Trachea. The other was the Case of a Girl who died of this Disease after a few Days Illness. The Trachea was filled with a white Mucus for the Girl died before it could be hardened into a Membrane.

With Respect to the Proximate Cause of this Disease we must adopt that which D. Hume has delivered. After relating the various theoretical Opinions of Persons who never had an Opportunity of observing the true Nature of the Disease, he goes on to observe, That all these fanciful & erroneous Opinions fall to the Ground when we inspect the dead Body. From that true Source of Knowledge we learn that the Cause of this Disease is a preternatural white thick tough Membranous Crust or Mucus in the Trachea. This Membrane is sometimes so tenacious that it will sometimes remain soaking in Water many Days without dissolving —

We are next to inquire how this Membrane is formed. For the necessary Secretion we find that all young Animals abound with Mucus or a gelatinous

gelatinous Lymph, all the Solids we find in them seem in a gelatinous State. In Children this Abundance is necessary to supply Nourishment to the growing Solids— This is the Reason why it is peculiar to a certain Age and at once accounts for its attacking Children of a grosser full Habit of Body. It most commonly occurs in Autumn especially if the Season is moist. It seldom occurs in Hot & dry or in cold & dry Weather— It occurs in Summer & Winter only when the Weather is damp.

From all this it appears that the Proximate Cause consists in a too copious Secretion of Mucus from the Glands of the Trachea which naturally secrete a Mucus to moisten the Trachea & to defend it from the Air which would otherwise soon dry up these Parts in passing too & from the Lungs. When therefore it happens that too great a Quantity of this Mucus is secreted, it often happens that Children are not attentive enough or from their being too young are not able to throw it up by coughing, the thinner Parts will be carried off by the Air in Respiration or by Absorption & the thicker Parts being compressed by the Air in Respiration while every circumstance favors its Concretion into a solid hard Membrane & the continual Secretion keeps it from adhering to the Trachea I have mentioned this so particularly because you will find Dr Cullen entertains a different Idea & also treats in a different Manner from what the Physicians here have found effectual.

The

The Hives have been confounded with a spasmodic Disease of the Lungs to which Infants are liable intirely different from them. Spasmodic Disorders of the Lungs come on suddenly & go off quickly. In the Hives the Children are ill 2 or 3 days before the Disorder arrives at any considerable Height - Spasmodic Disorders are periodical & are accompanied with a Discharge of pale limpid Urine, which is not the Case with the Hives - In Spasmodic Disorders of the the Lungs the Voice is not changed - A change of Voice is the Pathognomonic Symptom of the Hives. Persons subject to Spasmodic Disorders of the Lungs are free from all Complaints after the Paroxysm is over - This never takes Place in the Hives, for tho' there are in this Disorder Remissions, the Patient is not intirely clear from the Difficulty of Breathing & untill there is not the least Obstruction remaining. In all Spasmodic Constrictions of the Lungs the Secretion of Mucus is suppressed, thus in Spasmodic Asthma there is no Secretion of Mucus during the Paroxysm & this is relieved as soon as the Secretion takes Place - In the Humoral Asthma the Reverse happens. In the Hives there are evident Signs of a Collection of Mucus in the Trachea & this may be distinctly heard to rattle. No Spasmodic Disorder proves fatal on the first Attack - the Hives most commonly mortal. Spasmodic Disorders of the Lungs are relieved by Bleeding Blistering & Antispasmodics but these are used in

in the Lungs without Effect. The Lungs differ from spasmodic Disorders in their Symptoms, Termination & Method of Treatment. they are therefore not a Disorder of the spasmodic Kind & the Proximate Cause consists in too great a Secretion of Mucus in the Trachea. The Predisposing Causes are a wet or moist Atmosphere and a grosse Habit of Body. The Occasional Causes are any thing that will tend to relax the Mouths of the Glands which pour out their Mucus into the Trachea This we conclude from Analogy. When the Stomach is weak & relaxed it pours out a Quantity of tough Phlegm. From a Weakness or Relaxation of the Glands in the Urethra a Gleet is produced &c.

We are now to explain the Symptoms that occur The Hoarseness, Change & total Abolition of the Voice are owing to the Collection of Mucus in the Trachea obstructing the Glottis. when the Mucus fills the Glottis the Voice is intirely lost, when it is only partially obstructed the Voice becomes Shrill. This is prettily illustrated by a Case related by D.r Hume & communicated to him by Mr. Balfour. A Child had died with all the Symptoms of the Lungs particularly the shrill Voice. Upon opening it a Piece of Shell which the Child had sucked in was found lying over the ~~Glottis~~ Trachea about an Inch below the Glottis —

The laborious Breathing is a necessary consequence of the Obstruction & difficult Passage of the Air. The difficult Passage of the Blood thro' the Lungs accounts

amounts for the increased Aspiration & Change of Colour which occurs in the Face –

The Total Absence of Pain is owing to the Mucus between the Membrane & Trachea preventing the Pain –

As to the Prognosis we may observe that the Disease is divided into two Stages – It is generally to be considered as a dangerous Disease as it is Silent in its Approach & as alarming Symptoms appear till Death is at Hand. The first Stage often Lasts unobserved as the Children are generally too young to complain & before we can distinguish the Disease Death is upon them. If we are not called in till the 4th Day the Case is generally dangerous – If we see the Patient on the first or 2d. Day & the Breathing is not very Laborious; if the Pulse is Strong & firm; if the Voice is Strong & is changed only in Crying & Coughing & is otherwise natural we may entertain flattering Hopes. The first Sign of Safety is that the Cough becomes Stronger & Less Dry with the Signs which attend moist Lungs. The Case is Desperate when the Membrane is once formed Nature indeed by a Critical Coughing may eject the Membrane but as the Sensibility of the Trachea is intirely destroyed this Cough will seldom be excited –

As to the Method of Cure. Bleeding is sometimes ordered, but I much doubt whether it is either necessary or proper. When the Child is plethoric we may order Bleeding to alleviate the Difficulty of Breathing & to expel the

Transmission of the Blood thro' the Lungs. If the Proximate Cause we have assigned is right Bleeding can be of no Service to cure the Disease but may alleviate the Symptoms- Blisters may be used on the same Principles. Vomits are frequently given. I doubt tho' whether they are so useful as has generally been imagined; they certainly increase the Secretion of Mucus in the Trachea. Purgatives will answer our Purpose much better- They irritate the Stomach & Intestines & thus cause a Derivation of Humors to them. Of all Purgatives Calomel stands the best Chance of affording Relief- from its great Insolubility it will irritate the Stomach & Intestines, from its peculiar Attraction to the Glandular System it will promote a greater Discharge of Mucus from the Stomach & Intestines and as there is a considerable Sympathy between the Glands in the different Parts of the Body by increasing an Evacuation in one Part you will diminish it in another according to the old Maxim that two Evacuations cannot exist in the same Constitution at the same Time. Calomel therefore by increasing the Secretion in the Bowels diminishes that in the Trachea & therefore justly claims the first Place among Medicines used in the Cure of this Disorder. It is necessary to give it in large Doses & these should be frequently repeated. The following Case will show the Efficacy of Calomel & the Doses in which it may be given.

On the 3d. Day of the Disease I was called to a Child, the the only one of a Gentleman in this City to whom a

a Variety of Medicines had been given to no Effect, Vomits Pediluvia Blisters & Bleeding Sadly no means been neglected: Calomel was then proposed & given tho' the Child was but 10 Months old it took 20 Gr. of Calomel in 16 Hours & by this was snatched from Death for in all human Probability it must have been suffocated in 24 Hours had not this Method been pursued. When I am called in sufficiently early I have in several Cases given it with equal Success when the Disease has not arrived at its 2d. Stage & the Membrane was not formed. after the Membrane is formed all Assistance is generally too late In this Case we are ordered to excite a Vomiting and there are Instances where by violent straining to vomit the Membrane has been brought away, but this will rarely succeed. It is better however to try a doubtful Remedy than none. The Vomiting is to be excited by Tart: Emet: in considerable Doses. There is an Instance in Rume of a Boy 4 years of age who by coughing up the Membrane got immediate Relief tho' he did not recover the natural Tone of Voice for 3 Months. If the Cough could be excited by Steams drawn into the Mouth it might be effectual. I tried Fumes in one Case to no Purpose, but this should not deter us from repeating the Experiment. The Fumes of the Capsicum or common long Pepper are found to excite a Cough sooner than any Thing else; this therefore may be tried. It may at least convince the Patient that every Thing has been done that could possibly relieve him. Bronch-

Bronchotomy will be to no Purpose & will by no Means afford Relief unless the Membrane is extracted as the Disease is seated below the Glottis the Operation can stand but a poor Chance of Success - The Child cannot remain in the necessary Posture till the Membrane is extracted this was the Reason that the Operation did not succeed which was tried by a Gentleman of Eminence in his Profession in this City —

The next Class of Medicines we shall treat of are Emetics. The general Principles on which they produce their Effects you will find explained in D. Cullen's Materia Medica. We shall therefore immediately go on to treat of particular Substances & first of —

Antimony. The distinguishing Property of this is its Emetic Quality tho' it occasionally proves Cathartic, diuretic & diaphoretic. Crude Antimony is composed of two Parts - a Regulus & a Sulphur. The Sulphur was formerly supposed to possess particular Qualities, but more accurate Experiments demonstrate that it has all the Properties of common Sulphur. The Virtues therefore reside intirely in the Regulus Part. Numerous & various Methods have been used to obtain this Regulus - hence the Variety of Preparations which to this Day are kept in the Shops as Witnesses of the Ignorance of Physicians who ascribe different Virtues to each Preparation when they are intirely the same. The Regulus

The Regulus is not active in the Human Body unless in a Saline State. It must be converted into a Saline State either before or after it is taken into the Stomach. The various Method in which this is done you will find in every Dispensatory & Book of Pharmacy —

Crude Antimony or the Regulus when it is combined with Sulphur which cannot be affected by the Vegetable Acid is often intirely inert & exerts little or no Effects. But as the Antimony may be united with different Preparations of Sulphur & may occasionally meet with a strong Acid in the Stomach it may prove an efficacious Remedy in some Cases. Still however it is uncertain & possesses no Advantages over more effectual Preparations which are more certain. If however we must employ it we should always prefer the Tops of the Cones which contain most Regulus & it should be reduced to an impalpable Powder that it may be immediately acted upon by the Acid in the Stomach. The Vin: Emet: & Tart: Emet: are prepared by combining Antimony with the Vegetable Acid. The Vin: Emet: differs in Strength according to the Quality of the Wine as it is more or less acid - it is therefore uncertain in its Dose & different Wines posess different Virtues so that not two out of 100 are exactly alike. Of all the Preparation of Antimony none are more effectual & certain than the Tart: Emetic —

The Preparations of Antimony have been recommended for an almost innumerable Variety of Diseases and those of an obstinate Nature.

It

It will be difficult to give the Rationale of its action in every Disease; but we shall endeavor to give in those in which it is employed with Advantage—

It has no Effect on the Fluids, but its action is confined to the Solids. It proves a very great Stimulus to the Moving Fibres. But as we have not yet learned why one Substance has this Effect in Preference to another, we are ignorant upon what Principle every Preparation of Antimony excites Vomiting. Physicians have ever desired to have a Preparation of Antimony that would prove cathartic & diuretic without exciting Vomiting but it is not probable that such a Preparation will ever be obtained.

The Stomach is not the only Part of the Body that is affected by Antimony: its Effects are extended over the rest of the System by Consent or Sympathy. When we wish to avoid its Action on the Stomach it must be given in small Doses & repeated at considerable Intervals, when it will pass the Pylorus & affect the Intestines. We should never give a second Dose until the first has passed over the Pylorus or we should give such Preparations as are of difficult Solution. The saline Preparations given in Solution soonest excite Vomiting. It should therefore always be given in Solution when we intend it should act as an Emetic. As a Purgative we should give it in a Pill or Bolus. Its Effects are not limited to the Part to which it is applied but are extended over the rest of the System. Since Dr. Pringle & Baker found Antimonial Preparations the most effectual Remedy in Bilious Fevers & Dysenteries & other Disorders of this Kind. It

It acts as a Sudorific on the same Principles as other Emetics— by stimulating the System in general & by the Consent that subsists between the Stomach & the Surface & the Sweat often breaks out before the Medicine could possibly have been diffused over the System. I does not probably act as a diuretic from being combined & collected again in the Kidneys— It does not often act as a Diuretic & when it does affect the Kidneys it is probably from Sympathy—

The Butter of Antimony given with a Solution of Sal Amon: proves powerfully Diuretic— Tart: Emet: will sometimes have the same Effect especially in Cold Weather when the Discharge by the Skin is suppressed. Some Preparations of Antimony have been said to promote Expectoration. Kermes Mineral has been recommended as an Expectorant particularly by the French Physicians but without much Foundation. Given in proper Doses it will excite Vomiting & communicate its Stimulus to the Bronchiæ.

I have thus treated of the Virtues generally ascribed to Antimony. I am next to treat of the Diseases in which it is used & the Manner in which it operates. —

Vomits constitute a very great Part your Practice Antimony is used in a Variety of Diseases in which other Emetics may likewise be of Service. The principal Disease is Fever. It has long been esteemed a most excellent Febrifuge. It was at first kept a Secret among the Chemists & confined to them. They ascribed such great

great & Cardinal Virtues to it as almost to exceed the Bounds of Credibility. From later Experiments it appears that too much can scarcely be said in its Favor. As it vomits and Purges Physicians supposed that it cured Fever by evacuating depraved & vitiated Bile. This is an erroneous Opinion - it is not probable that its cheif Action is owing to this Circumstance. It may prove effectual occasionally when given in such a Manner as not to as not to cause either of these Evacuations.

We find that it is an excellent Remedy in Rheumatism which is a topical Affection - and in Inflammatory Fevers - Here it cannot possibly act altogether by expelling depraved Bile or vitiated Fluids. We are therefore to Account for its Operation on some other Principles. As it is emetic it proves diaphoretic by acting on the Stomach independant of being mixed with the Fluids of the Body. For this Purpose we generally give Tart: Emet: in small & repeated Doses so as to excite a Nausea without Vomiting. When the Sweat breaks out it lasts for 3 or 4 Hours & even after it ceases the Skin is moist for several Hours. It also generally gives one or two Motions to Stool - the Pulse generally becomes quicker & the Toping & Delirium are increased. After a Time the Patient falls asleep during which the Pulse becomes less frequent softer & the Delirium abates - This is the Manner of its Operation in Continual Fevers - 3 or 4 Doses put such an effectual Stop to the Progress of the Disease

as to bring it to a salutory Crisis —

We likewise use it in Intermittents. If given before the Paroxysm comes on by exciting a Nausea & Sweat it puts off or considerably mitigates the Fit. Frequently too if it is an irregular Intermittent, that is if it is not succeeded by a Sweat or a perfect Intermission, it will bring to a regular Type & give us an opportunity of Administering the Bark or other Remedies to prevent a Return. It may be given in Solution or in Substance — ℔ss or ij may be dissolved in ℥iij of Water & a Table Spoonful given every ½ Hour until it excites a Nausea or even a slight Degree of Vomiting This then will afford us the proper Dose. If we give it in Substance we make it into Pills with Conf: Ros: & may give ʒj ℈ss or a ℔ss at a Dose. You are to observe that a Person can take 3 Times the Quantity in Substance that he can in Solution.

Tart: Emet: is not the only Preparation of Antimony that is used for this Purpose. Physicians have been anxious to find a Preparation that would excite a Sweat without Vomiting. No one Preparation possesses any Thing like a Specific Virtue — they all have the same Effects tho' one produces them in an higher Degree than an other. James' Powder which is undoubtedly a Preparation of Antimony possesses no Specific Virtues & is liable to all the Objections of the other calcined Preparations. I have seen James' Powder

used with Advantage in the Hospital at Edinb: when Experiments were made on Purpose to discover its Nature & Virtues. It was always found to be uncertain in its Operation Altho' in some Cases it proved an excellent Remedy in others it often produced no Effect but what might be obtained from Tart: Emetic with more Certainty. In my own private Practice I have sometimes administered it but always found it uncertain in its Operation & sometimes it did not produce any Effect I have therefore intirely laid aside more especially as the Preparation is kept a Secret. It is but lately that we have learnt that this Medicine in fact no longer exists as Dr James has been dead 9 or 10 Years & died without disclosing his Secret & therefore what has been sold since that Time under that Name are merely Imitations & consequently spurious. It is probable Dr James had his Reasons for keeping it a Secret & not disclosing it & that he consulted his posthumous Reputation. It is indeed highly probable that James took the Composition from some one of the many Preparations that were made when Antimony was first introduced into Medicine & that he was by no Means the original Inventor. We are indeed told that some Person contended the Matter with Dr James & asserted that he had communicated the Preparation to him. This is the Case of many other Persons besides Dr James who have vended for their own private Emolument different Compo-

Compositions which had gone into Disuse & which are therefore considered by them as Legal Property—

The celebrated Riverius made use of a Preparation which is known under the Name of Antiquartzeum Riverii which is supposed very much to resemble James' Powder. Antimony was supposed most effectual in Bilious Intermittents & even Bilious Diseases of all kinds if they prove Purgative in a slight Degree— Mine in the Antiquartz: Riverii, Calomel; in the Pulvis Cornachini Scammony & to Tart: Emet: Glaubers Salt is generally added to cause a gentle Evacuation by Stool. To the former Preparations this addition may be necessary, but Tart: Emet: can scarcely ever be administered without proving purgative & therefore it is seldom necessary to add anything of this kind. The celebrated D Huxham prefers the antimonial Wine to all the other Preparations of Antimony. But this is more uncertain than Tart: Emet: it is seldom that two Preparations possess the same Strength & it is neither so certain nor sudden in its Effects as the Tart: Emet: which is the most certain Preparation we can employ to overcome Spasm & terminate the Fever. As the Spasm continues thro the whole of the Fever there is no Period when the Tart: Emet: is not proper, tho' it is more effectual when given early in the Disease—

We are next to speak of its Use in Dysentry. Some Years ago it was common to use Tart: Emet: with very great

Success in the Diseases of this Kind. Since it was concluded that other Emetics might be used with the same Advantages at first indeed it was supposed that Ipecac: acted by some Specific Virtue, as its Success was great beyond Expectation - but we now Know that it posesses no such Power & that its Virtues are intirely owing to its Action on the Stomach Intestines &c. It has been much controverted how Emetics act in Dysentery & how they effect a Cure. There is no Practitioner but what knows that they frequently prove very useful & even cure the Disease by Vomiting & Purging & thus evacuating the Stomach and Intestines. But their Effects are not confined to this alone, for it often happens that they cure the Disease when they are administered in such small Doses as neither to purge nor vomit. I think therefore that their good Effects must be owing to their diaphoretic & sudorific Virtues. Antimony possesses these Virtues in a more eminent Degree than any other Emetic. In Dysentery & Diarrhoea the determination to the Skin & the Perspiration are checked if not altogether suppressed. Since the sagacious Sydenham confines Dysentery as a Fever thrown upon the Intestines whether it is brought on by Contagion or generated in the System. We are still certain that the Perspiration is impeded & that the Humors are thrown upon the Bowels - We Know that Diarrhoas are brought on almost in an Instant by exposing the Body to cold moist Air by which the Perspiration is suppressed - It

If this should happen in a moist warm Summer, when the Humors have a putrid Tendency a Dysentery would be the Consequence. By restoring the Determination to the Skin we cut off the Source of the Disease & thus we remove, for take away the Cause of the Effect.

As Ipecac: has been employed in this Case with Advantage & as we have shown its Effects to be owing to its diaphoretic Virtues, it is highly probable that Lillie's Virtus that possesses this in an equal or superior Degree will produce equal or superior Effects. This we would conclude from Theory alone. The Tartar Emetic is more powerfull than the Ipecac. and we have undoubted Experiments to confirm it. The learned & ingenuous Dr. Baker made many Experiments with Tart: Emet: in the Dysentery & found it more effectual than Ipecac: or any other Substance he used. The Vit: Cerat: Ant: has been considered as the best Preparation in the Dysentery but I much doubt whether this Preference is founded either in Reason or Experience I own indeed that it is less soluble than other Preparations & therefore may remain longer on the Stomach and prove more powerfully diaphoretic and purgative but as the Action of the Vit: Cerat: Ant: depends upon the Quantity of Acid it meets with in the Stomach its Effects must always be uncertain & doubtfull sometimes great at others trifling & imperceptible.

I shall here repeat an Observation I have had occasion repeatedly to make in the Course of this

Sutures- That as the action of all Metallics given in Substance must depend upon the acid they meet with in the Stomach there Effects are always uncertain and doubtful, which is not the Case if they are given in a Saline State. From this we would conclude that the Tart: Emet: is more effectual than the Vit: Cerat: Ant: but we are convinced it is the Case from accurate Experiments. As this in Dysentery has the Power of giving the Fluids a new Determination it will have the same Effect in other Diseases- It appears that the Vit: Cerat: has been employed with great Advantage in Hemorrhages of the Uterus- Here it is probable that other Preparations of particularly Tart: Emet: may be given with much greater advantage- and in this Case it does not act by expelling any Morbific Matter but by restoring an equable Circulation to every Part of the Body & taking off the Spasm on the Surface. In Hemorrhages and Dysenteries it is much more effectual combined with Opium. Since Dr. Dover's Powder has been known which is a Composition of Ipecac: & Opium it has been an established Fact that Emetics combined with Opiates are more effectual Sudorifics than either given alone & it appears that the Virtues of each are improved & heightened by the Combination. Opium combined with Antimonial Wine is one of the most effectual Sudorifics we can employ. The Diaphoretic Virtues of Antimony have

have been confirmed by its Usefulness in Foulnesses &
Diseases of the Skin—

The Skin is subject to a Variety of Disorders tho' far from investigating the Causes of them we have not yet been able to give them all Names. It is scarce necessary to mention the Use of Antimony in all these Cases. Every Author & indeed every Practitioner places his chief Dependance on Antimony. It is found that those Preparations are most serviceable that are most apt to purge vomit or throw Diaphoretic It operates by increasing the insensible Perspiration and by this accomplishes a Cure & by promoting a freer Circulation in the extreme Vessels the depraved Fluids are expelled. For Diseases of this Kind Physicians generally employ such Preparations as have the Acid in their Composition, such as the Regulus Medicinalis, the Kermes Mineral & the Sulphur Aurat: Ant: Dr. Plummer combined the Sulphur Aur: Ant: with Calomel. In this the Antimony renders the Mercury more safe & the Mercury increases the diaphoretic Virtue of the Antimony. But tho' we thus have a very good Preparation of Antimony — all the Preparations combined with an Acid are more certain & effectual than those without tho' combined with Mercury or any other Substance. Undoubted Facts show that that the Vin: Emet: the Butter of Antimony & Sart: Emet: all prove effectual we should therefore combine the Mercury with Sart: Emet: by which the Virtues of both are

an increased dose obtain a Medicine much more
Natural - in the Lues Venerea especially where there
are Ulcers as it vomits purges Sweats & promotes the
Discharge by Urine. As we find they have been used
with Success in one of the most stubborn Diseases we
must consider them as one of the most capital
Remedies in the Mat: Med: & with which an atten
tive & judicious Physician may perform Wonders
When Pulv Tart: Emtt: I dissolve from 5 to 6 grains
in 6, 8 or 10 Ounces of Water of which two Tablespoons
full are to be taken every 5 or 10 Minutes until a
Vomiting is produced - This is a most agreeable &
powerful Emetic - By dissolving it in a large Quan -
tity of Water we have it entirely under our Manage -
ment & can may excite Vomiting to any Degree
we please - We need be under no Apprehensions of
bad Consequences from it. To Children we may give
it with equal Safety - Children bear no Evacuation
better than Vomiting - Nature probably for very
wise Purposes has endued them with very irritable
Stomachs - if distended with even the Mothers Milk
they will be excited into Contraction & throw it
up. There appears no Remedy better adapted to
the Diseases of Children than Emetics & they will
take them for several Days together without being
nauseated by them in the Manner that they are by
Purgatives. While on this Subject I must recom -

recommend it to you to read a Paper in the London Medical Essays which will afford you both Entertainment & Improvement. I have one Remark to make - that the frequent use of Emetics is attended with one Inconvenience & that not an inconsiderable one - they certainly have a Tendency to weaken the Tone of the Stomach. Some Constitutions will not bear Tart: Emet: or any other Antimonial Preparation. This is particularly the Case with those Persons who are liable to Spasms in the Stomach and Intestines - In these Cases we should not advise Tart: Emet: but Ipecac: or some other gentle Emetic in its Stead. We should not think of some other Emetics but on these we shall have but few Remarks to make as they are all perfectly similar & what is said of one applies almost in every Respect to the rest

Lecture 33d

Ipecacuanha is the Produce of the Southern Parts of America where it is confided by the Natives as infallible in the Cure of the Dysentery to which they are much subject. Ipecac: is quicker in its Operation than Tart: Emet: The Dose is from gr. v. to xx. or more - You are however to observe that the small Doses will excite Vomiting they will not produce copious Evacuations, nor

no emulge the glands so completely as larger Doses.
You may divide 15 or 20 Gr. into 2 or 3 Parts - if the first
Dose does not operate in 1/4 of an Hour we are to give
the second dif this has no Effect in 5 or 10 Minutes the
third which will seldom fail. This Method is partic-
ularly proper for Children - for them we divide 3 or
6 Grains in 2 or 3 equal Parts which are to be admi-
nistered as above - By observing this Method we
seldom or never produce too much Vomiting or
straining due always adapt the Dose to the Strength
of the Patient. Persons who are apt to strain much in
Vomiting should have a Bandage tied tight round
the Abdomen - this supports the Abdominal Muscles
and prevents the violent straining. No Drink
should be taken immediately after an Emetic but
it should be taken immediately after every Eva-
cuation - it is thus kept longer in the Stomach
and more effectually dilates the viscid Matters
contained there - Large & seldom repeated Potas-
tions are preferable to small & frequently repeated
Draughts. Camomile Tea is preferable to warm
Water especially in weak Persons - it will
increase the Evacuation by Stool & does not
relax the Stomach so much as warm Water -
In putrid Diseases it is highly proper as it will
prove serviceable as an Antiseptic & where there

is too much Acid it will by its Bitterness correct it
It is not necessary for Infants to drink much as they
abound with Humors & this is the Reason that they
vomit more easily than Adults —

Emetics are given to prevent Diseases from
coming on, as the Scarlatina, Putrid & Pelectial
Fevers & in the Beginning of every Fever that is
not attended with topical Inflamation even in
these if there is a Nausea with a Giddiness of the
Head. In robust plethoric Constitutions it will be
best to premise Bleeding before giving a Vomit-

2dly They are given during the Eruptive Fever
in the Small Pox & Measles - Here Emetics lessen
the Fever without weakening the Patient so much
as Purgatives. Of their Use Putrid Diseases we
shall treat on a future Ocasion —

3dly They are used in Intermittents - Here they
should be given immediately after the Fit -

4thly They are recommended by the French
Physicians in the Serous Apoplexy & Lethargy

5thly When a Person has over eat himself or
committed a Debauch in eating or drinking or has
taken indigestible Food occasioning Crudities, Nau-
sea, Oppression & Pain in the Stomach, Headach &
Vertigo - Here speedy Relief is necessary - all Tightness

from Cloths &c should be removed - the Head should be laid high a Vein should be opened - a Vomit should be immediately administered or if this cannot be swallowed or there is not time a Vomiting must be excited by tickling & irritating the Uvula & Fauces - acrid & stimulating Glysters are to be injected for the Disease is to be removed only by evacuating the Stomach & Bowells. Attacks of this kind often prove fatal when the Patient is said to die of an Apoplexy & Physicians have often mistaken it for an Apoplexy - but it may always be distinguished from that by the small low Pulse & the Breathing being without Snoring & the puffed up Stomach Fits coming on when this Organ is disordered with Aliments -

6thly. Vomits are useful when Children are subject to Worms they them thrown into Convulsions - I have generally found them a sovereign & infallible Remedy. It will sometimes throw up the Worms or if it has not this Effect it will at least obtain a Respite, when we may give the proper Vermifuge Medicines -

7thly Emetics are also proper when Persons have swallowed Poisons - If these are of the Vegetable kind and taken in Sallads occasioning Pain Retching & Cold Sweats Vertigo &c. we should immediately give from 20 to 30 Grains of Ipecac: let the Patient drink plentifully of warm Water - tickle & irritate the Uvula so as to procure copious & sudden Evacuation - the Patient may likewise drink plentifully

of Water acidulated with good Wine Vinegar - When a Person has swallowed Arsenic he feels a Burning in his Stomach like Coals of Fire & the Mouth & Fauces are inflamed - In this Case Vomits are improper as they tend to increase the Inflamation. In this Case we must endeavor to envelope the Poison & to defend the Coats of the Stomach from its Acrimony by ordering large Draughts of Water & Oil or melted Butter, Cream & Milk - By Draughts of this kind we often promote the Discharge of the Poison. We endeavor to promote Vomiting by irritating the Uvula & Fauces - After a Person has by these Means recovered from immediate Danger he should for some Time live altogether on Vegetable Broths Milks & Cream —

8thly - Vomits are likewise useful in the Asthma whether the Spasmodic, Chronic or Humoral - In the Spasmodic Asthma we give from 15 to 20 Gr. of Ipecac: at a Dose - In the Chronic we give from 2 to 5 every Morning - its good Effects are owing to its diaphoretic & antispasmodic Virtues by which the Determination to the Lungs is taken off & the Perspiration is increased -

9th. Emetics have been used in Hemorrhages of the Uterus & Lungs - In the former they may produce good Effects by taking off Spasms & Irritation & determining the Fluids to the Surface. In Hemoptoe their Use is Ambiguous. Dr. Bryan Robinson

ajurance that he always found them effectual in Stopping of Blood, but Prejudice is so strong against them that I have never prescribed them, tho' persuaded in my own Opinion that they may occasionally be used with Advantage. We know that Physicians of all Ages have prescribed long Sea Voyages to Persons subject to the Hæmoptoes & Consumptions without any Apprehensions of Danger from the Sea Sickness & Vomiting which is much more violent & last longer than the Vomiting produced by an Emetic - This may be used as an Argument in Favor of the Practice. I would recommend it to a young Practitioner not to oppose the Prejudices of his Fellow Men he will often have Occasion to say with the Mad Medea

"Video meliora proboque
Deteriora sequor" ——————.

Small Doses of Ipecac: may be given in Pluricies & Peripneumonies to promote Expectoration Vomits are improper in weakly Persons who cannot bear great Evacuations & Irritation. Vomits weaker must life than Purgatives as the Stomach only is evacuated whereas Purges evacuate the whole Intestinal Canal. Vomits should not be given to Hysteric Women during the Paroxysm nor to Persons under violent Agitations of Mind. Robust Plethoric Patients should be bled before they take an Emetic. We should not give a Vomit to

to Women during Menstruation nor to Women far advanced in their Pregnancy unless some particular Reason or some urgent Necessity requires it. Persons liable to Hernia should be very cautious about taking Emetics - they should at last apply a proper Bandage to prevent the Hernia from falling down. No Person subject to Apoplexy should ever take a Vomit if they can possibly avoid it. In Persons subject to Hæmorrhages of Blood from the Stomach or laboring under Inflamation of the Stomach or Intestines Emetics are totally inadmissible —

Cathartics. See D^r Cullen's Mat: Medica

Diuretics, are such Medicines as increase the Discharge by Urine - They are used in Dropsical Cases we shall therefore premise a few Observations on the Nature of Dropsy which will enable us to judge of their use -

The Proximate Cause of Dropsy has been imperfectly treated of by Authors of Reputte - All the Proximate Cause may be referred under two Heads - 1st. Those that depend upon the State of the Fluids 2^d. Those that depend upon the State of the Solids or Vessels. Under the Proximate Cause depending on the State of the Fluids we rank - First. —

First_ A Disposition of the Fluids/ I mean their constituent Parts/ to recede from each other from an Increase of their watery Parts_

2d. A Disposition of the Parts of the Fluids to recede from each other without an Increase of their watery Parts.

As to the Proximate Cause depending on the State of the Solids or Vessels it depends

1st. ~~It depends~~ on the State of the Exhalents_

2d._ Of the Absorbents

3d. Of the Lymphatics___

First as to the State of the Fluids the watery Parts or the Serum may be increased by a great Quantity of Water being taken into the Body_ 2d By an imperfect Assimilation 3d. By an Obstruction of the natural Evacuations_ The first Cause it is easily conceived may take Place. The 2d. or imperfect Assimilation is owing to an Imperfection in the Digestive Organs 3d. The watery Parts may be increased by a Suppression or Diminution of any natural Evacuation produced either by an Obstruction in the Secretory Organs or by some other Cause_ Thus it is not uncommon for an Obstruction in the Urinary Passages to prove the Cause of Dropsy_ Obstructed Perspiration may also be a Cause. It does not always follow that these Obstructions are the Cause of Dropsy for frequently the Suppression of the Secretions are the Effects of the Disease which is owing to some other Cause.

2d The Fluid may be deposed to recede from each other/ the Constituent Parts/ This is most commonly observed to come on in Consequence of great Hemorrhage- There is not a more frequent Cause of Dropsy than this whether the Hemorrhage is spontaneous as the Nerves, or morbid as they produce a general Weakness of the Solids- Independant of this consideration these Hemorrhages by taking off a large Portion of Rhoglobules occasion a Separation of different Parts in the extreme Vessels- Under this Head may be referred considerable & long continued Evacuations which take off the serous Parts by which the System is weakened- And the Cause may be ranked under this Head when the Dropsy depends on a Rupture of a Lymphatic. Here tho' there is no Recession of the Fluids they are discharged & accumulated. Analogous to this is the Dropsy that depends on Hydatids/ when from any accidental Cause a small Blister is raised on the Surface of some Viscus which breaking pours out its Fluids/ even from so slight a Cause an Ascites has been produced.

Of the Causes that depend on the State of the Solids The 1st is from a Relaxation of the Exhalent Arteries. If the extreme Arteries are relaxed we can easily conceive that an increased Exhalation will follow- The Difficulty lies in knowing the particular Instances when this takes Place-

But a more common Cause is any Obstruction to the Return of the Venous Blood- As these increase the Exhalation they come properly enough under this Head tho' they are produced by different Causes- First-

1st Compression by Ligature - Aneurisms - 2d. Polypi in the Veins - This may occur in every Part but as often observed to be the Cause of Dropsy except in the Beginning of the large Veins as the Vena Cava & Pulmonalis - 3d. An affection of the Coats of the Veins - All topical Affections may impede the Return of the Venous Blood & be the Occasion of Dropsy - I once saw a fatal Dropsy occasioned by the Coats of the Jugular Vein being thickened - 4 When any large & considerable Vein is inflamed especially those that are concerned in the Transmission of the Venous Blood in the Lungs - There are few Peripneumonies but what have a considerable Collection of Water in the Thorax & when violent they are apt to terminate in Hydrops Pectoris - An Inflamation of the Liver may and often does occasion a Dropsy of the Abdomen - 5 thly A Schirous of any considerable Viscus is more apt is more apt to produce a Dropsy - There is no considerable Induration of the Lungs without a Dropsy of the Breast When the Liver is Schirous the Stagnation of the Venous Blood produces an Ascites or Anasarca - The same thing happens when the Spleen is Schirous - 6 thly When the Veins are in a Plethoric a Dropsy will take Place - Since the most frequently Dropsies occur in old than in young Persons - To this Head we may refer Obstructions of any usual Evacuations as of the Menses & Piles - These may occasion Largeor & Weakness in the Circulation The Venous Blood is often prevented from returning by its own Gravity - This is Foundation of the Oedematous Swellings in the lower Extremeties which are always worse at Night -

Lastly. Vicious Obstructions may be owing to a Want of Powers producing Motions or to a Palsy of the Veins themselves.

A diminished Absorption may be owing to a Fault in the Absorbent Vessels when they have lost their Tone. We sometimes observe sudden Cures to be performed by spontaneous Evacuations & we sometimes relieve Dropsies by Vomits in 12 or 18 Hours. Here the Evacuation is not the sole Cause of the Cure but the Tone was at the same Time restored to the Absorbents. ~~Lastly~~

Lastly Dropsy may be produced when considerable Obstructions are formed in the Lymphatics. This however is a rare Occurrence. These are the different Causes of Dropsy & I think there is no Species but what may be referred under one or other of these Causes.

The Cure must be instituted according to the Cause. It would therefore be absurd to lay down any general Indications of Cure for a Disease that at different Times requires different & even opposite Methods of Treatment. Whether the Disease is owing to an Affection of the Fluids or of the Solids Diuretics are always indicated to give at least a Temporary Relief & to allow us Time for the Exhibition of more effectual Remedies. But tho' they are always indicated they are seldom attended with the Effects for which we prescribe them. Even when we give the strongest Diuretics we cannot be certain of their Operation; but if they do increase the Discharge by Urine they always

they always have a salutary Tendency. Purgatives and Emetics tho' they evacuate the Water more speedily yet at the same Time by relaxing & weakening the System they contribute to a more copious Effusion— Diuretics are not attended with these Effects— They are proper in every Species of Dropsy. The Fixed Caustic Alkali is one of the strongest Diuretics often given in an Infusion of Wormwood or Chamomile Flowers for we find that Bitters increase the Diuretic Qualities. From ℥i to ℥ß of Sal: Tart: may be dissolved in ℥viij of any bitter Infusion & a Teaspoonful may be taken every 2 Hours. The Bitter likewise acts as a Tonic, contributes to strengthen the System & has a Tendency to prevent Accumulations & resolve the Obstruction in the Viscera.

Analogous to the Caustic Alkali are the Ashes of Broom. When we use Ashes we should infuse them in Rhenish Wine or Cyder to neutralize Part of the Alkali. Of this the Patient may take a Wine Glass full at a Time & repeat the Dose occasionally until it produces the desired Effect. The Ashes of Broom have been supposed to possess some peculiar Virtues: They do not deserve a Preference to the Ashes of Hickory or of Oak which are the strongest of all as containing most fixed Alkali will answer equally well & there are many Instances where they have proved effectual. All Emetics & Purgatives by boiling become Diuretic Jallap & Ipecac: in this way become powerfully Diuretic & formerly mentioned Tobacco acquired these Virtues by boiling

Seneka Snake Root given in a large Dose vomits in a less it purges in Decoction proves Diuretic, Diaphoretic & promotes Perspiration & Expectoration hence is used in Pluresies & Peripneumonies & is likewise used in Dropsies when it is found effectual —

It is not many Years since D^r^ Stork introduced Colchicum into Medicine for the Cure of Dropsy. Before his Time it was considered as a Poison & indeed it is highly acrid & poisonous & for this Reason ought to be employed as it is in this Respect on a Footing with Squills when fresh. Unless it were highly acrid it would have little Effect in curing the Disease. It is usually given in Form of a Syrup. I have seen it tried in several Cases in which it proved to have some Effect tho' I never saw it perform a perfect Cure. It does not always prove Diuretic & indeed it is but seldom that we can assure ourselves of any Medicine having this Effect —

Mustard, Horse Radish & the different kinds of Cresses are the best in Scorbutic Disorders. They deserve the first Place where the Ancles & Legs swell from Debility. They may be given in Substance Decoction & Infusion. Mustard Whey is one of the Substances to give a light Stimulus especially where there is a Paralytic Affection of the Muscular Fibres.

Within —

Within these Few Years has been introduced into Medicine the Digitalis, Purpurea or Foxglove which on many Occasions has been found to be a most effectual Diuretic. It is a Plant which grows spontaneously in England & several other Countries in Europe. It is not a Native of this Country though it is cultivated in Gardens in & near this City. Dr Withering has published a Treatise on this Plant & gives us a Variety of Instances in which proved successful in Dropsies & particularly in the Hydrothorax a Disease hitherto incurable. Its use in this Disease has been confirmed by the Experience of others & Dr Smith of Birmingham informs me that it has been the Means of saving the Lives of several Labouring under this Disease. He also informed me that it had proved fatal to several before the proper Dose was ascertained You are to observe that it is an Highly acrid & poisonous Substance if taken in too large a Quantity as it acts most powerfully on the Urinary Passages. When too much is taken it produces an high Degree of Nausea Vomiting & Purging which continue for several Days This Symptoms may be unrelieved by Opiates. It has a peculiar Effect on the Action of the Heart. It has been known to diminish the Pulse to 35 p Minute & I have no Doubt but it may arrest the Action of the Heart altogether & then prove fatal. I have had an Opportunity of observing its Effects

in several Cases in which it has been employed here.
The first was in a Boy of 14 who labored under a general
Dropsy accompanied with an affection of the Breast. I was
consulted by two Physicians who by using Calomel & other
powerful Remedies for a length of Time had relieved but
not intirely cured him. He now took the Foxglove in
Powder in the Quantity of 5 Grains. This operated so violently
by Urine that it was found necessary to reduce it to Half
this Quantity. By the use of this Medicine he was cured
in a short Time. The other was the Case of a Gentleman
from the West Indies who came here for his Health. The
Physicians there supposed him to have a collection of
Water in his Chest. He was Odematous all over his Body
particularly his Legs; his Abdomen was distended & his
Urine in small Quantity; his Difficulty of Breathing
was so great that it was necessary that it was necessary
to give him 3 or 4 Grains of Opium to procure him Rest
which was notwithstanding broken & disturbed. As
every other Remedy had been tried but in Vain the
Foxglove was prescribed but with very little Expec-
tation of Success. The first Dose which was ten Grains
produced a remarkable Effect in his Urine & Respiration
and continuing it a Week he was relieved of his Swelling.
In some Days his Abdomen again become distended
in Consequence of his Viscera being obstructed & diseased.
The Reason why he took 10 Grains for a Dose was be-
cause the Plant was gathered late in the Fall when
its Virtues had been impaired by the Frost, otherwise
you must observe that 5 Gr.s is a large Dose. The

The Difficulty of Breathing has not returned since. It is very remarkable that the Medicine has been administered several Times since but has not had the same Effect on the Urine nor on the Swelling of his Abdomen — We have lately had Recourse to Mercurials which have been of some Service most probably from resolving in some measure the Obstruction in the Viscera —

The third Case is that of a Gentleman in Maryland in which I have been informed it has been a Third'd with equally good Effects.

The Dose must be regulated by the Effects produced in the Stomach. In general 5 Gr. once or twice when when the Plant is in Perfection is a considerable Quantity. 2 ß or 3 Gr. will produce the proper Effects. It will be proper for the Patient to drink of Toast & Water or some diluting Drink to determine it to the Kidneys. When the Swelling is removed a proper Course of Tonics and Chalybeates must be administered to prevent another Accumulation. Upon the whole the Digitalis may be considered as the most valuable Acquisition that has been made to the Materia Medica for many Years Past. Its use is not confined to Dropsies. It has been found useful in Mania. In Hæmoptoe D. Withering has found it successful in several Cases & in many Instances it has proved a most powerful Antispasmodic

Lecture 34th.

Epispastics —

Hippocrates recommends the internal use of Cantharides but was unacquainted with their external Application. Aratæus Cappadox was the first that employed them as Vesicatories & he ordered the Patient to drink Milk for 3 Days before their Application to prevent Strangury. They did not come into use until the XVII. Century when they were again revived in Italy & their use from that Time became Universal.

From the use of Epispastic Medicines the following direct Effects are produced. They excite Pain; increase the Quantity of Fluids circulating in the Part to which they are applied; they produce a Discharge of Liquid in the Form of Serosity & they produce a Discharge of Pus. The Changes produced in the System from the primary Effects of Epispastics are Attention to the Sensation of Pain excited by the Application of the Epispastics — An Increase of Excitement in the Nervous Energy thro' the System in general — An uncommon Determination of Blood to the Part particularly acted upon — a Diminution of the Quantity of Blood passing thro' the Blood Vessels in the neighboring Parts of those in which the Flow of Blood is increased — a permanent Change in the Mode of Circulation — a Diminution of the Quantity of the circulating Fluids and a particular Diminution of the Serous Part of the Blood.

The

The different Articles referred to the Class of Epispastics may be distributed into the three following Orders

1st Epispastica Rubefacientia — as Examples of which may be mentioned Sinapi — Vol: Alkali —

2d. Epispastica Vesicantia as Cantharides —

3d. Epispastica Suppurantia — as Issues & Setons —

The Indications which Epispastics are capable of fulfilling may be derived from the three following Sources

1st From their action on the Nervous Energy — Hence they may be employed to diminish violent Pain — to take off the Effects of uncommon Sensibility — to remove Torpor

2d. From their altering the Balance of Circulation Hence they may be employed to diminish the Impetus of the Blood against any Part morbidly affected — to diminish a morbid Increase of Action in Vessels in the Neighborhood of those to which they are applied —

3d. From their producing Evacuation — Hence they may be employed to diminish the Quantity of circulating Fluids when too great for the State of the System at the Time — to evacuate morbid Accumulations of Serum —

These Indications may be illustrated & confirmed from Practical Observations concerning the the Use of Epispastics in Cases of Tooth Ach, Hæmorrhagy Apoplexia, Ophthalmia, Hepatitis & Hydrocephalus —

The principal Circumstances respecting the Choice of Orders in the Class of Epispastics may be deduced from

from the following Observations concerning each

1 Ephistastica Rubefacientia. The Individuals re-
ferred to this Order are not extensively applicable to answer
the Purposes for which the Class may be employed. They
are fitted to fulfull some Indications from variation
on the Nervous System. They are preferable to other
Ephistastics for the Removal of Torpor when suddenly
required. They may also sometimes be employed to
fulfill Indications as changing the mode of circula-
tion - but they are rarely in this Intention preferable
to the other Orders. From the Degree of Effect they
produce they are applicable chiefly to those Cases
when slight & transitory changes are wanted. The
Constitutions to which they are principally adapted
are Dry spare Habits - Those which would be hurt
by any Degree of Evacuation & those much debili-
tated by long continued Diseases ——

Ephistastica Vesicantia. The Individuals belong-
ing to this Order are from their Nature adapted for all
the Indications to be answered by the Class. They are
particularly preferable to all others where Evacua-
tion is suddenly wanted. From the Degree of Effect
they produce they may be employed when the highest
Changes are requisite. They will scarce admit of being
adapted to those Cases where very slight Changes
only are proper. The Constitutions to which this Order
are chiefly adapted are the Serous & Phlegmatic; those

those in the Prime of Life & those affected with Acute Diseases—

Epispastica Suppurantia. The Individuals referred to this Order are from their Nature adapted to fulfill those Indications which may be answered by a change in the Determination of the Blood. They are frequently of remarkable Service for diminishing the Impetus of the Blood in Parts morbidly affected. They may also be used with Advantage to diminish a morbid Increase of Action in neighboring Vessels if a considerable Effect be not required. They may be used likewise for some Purposes to be answered by Evacuation - They are not adapted to diminish the Quantity of circulating Fluids - but they may be of Service for evacuating Serous Accumulations - they are chiefly of Use for this Purpose, when these are deep seated or in their Nature such that they cannot be easily acted upon. The Constitutions to which they are adapted in Preference to others are the Aged, the Irritable & those laboring under Chronic Complaints—

The Cautions to be observed in the Employ-

of Epispastics as derived from their Nature, chiefly respect the Pain which is occasioned by their Action especially when that has no Tendency to remove the Complaints against which they are used - The Inflamation they excite on the Part to which they are applied - And the Strangury which is a frequent Attendant of their Operation.

The

The Conditions of the System which chiefly require attention in this Employment are - the female Sex - & lax and phlegmatic Habits -

The circumstances chiefly to be observed with Regard to the Regimen necessary during the Exhibition of this Class reflect - the Accomodation of the Diet & Temperature ~~& Temperate~~ to the Disease of the Patient - The use of Demulcents & Diluents - The length of Time which the Order of Vesicantia are to be employed - The Treatment of the Part after they are removed - And the Continuance of Epispastica Suppurantia when employed.

The apparent Individuals belonging to this Class of Medicines, are chiefly ~~indicated~~ contraindicated by the Presence of the following morbid States - An high Degree of Irritability in the System in general - Morbid Splritude of the Blood - Or a general Inanition of the Fluids -

We shall now speak of the use of Blisters in Fevers. When Fevers accompanied with Headach of a dull kind & coma, Blisters are commonly useful. Blisters are also of Service in Local Inflamations as in the Pleurisy after Bleeding - likewise in Peripneumony when the Pulse is first lowered by Bloodletting. The Effects of Blisters in Continual Fevers are doubtful while the Pulse continues full & strong but they are of use in their Decline & the Pulse Sinks. From Dr Lind's Account however it appears that Blisters are useful if applied 24 Hours ~~after~~ the first Attacks of an Infectious Fever.

but a Vomit must be previously exhibited. Blisters are very seldom of Service if neglected for the first two or three Days. If they are applied within the first 24 hours before the Spasm is formed they may be of Service & prevents its Accession afterwards they are not of Service. When there is a Substitutes Tendineum & an increased Sensibility of the Nervous System Blisters are of no Service even tho' the Pulse is low. They are useful when a Delirium comes on suddenly. Blisters are of most Service in cold Phlegmatic Constitutions. They are often more Service in Children than in Adults. Children have taut Solids & abound more in Serosity. Blisters lessen the Pain of an inflamed Part when applied near to it. They cure the Pleurisy by drawing the Fluids from the Part affected & thus removing the Obstruction. In Angina, Pleurisy & Hepatitis, Blisters lower the Pulse more than repeated Bleedings; for tho' Cantharides quicken the Pulse in Health it is not the Case here. When Blisters lessen the Frequency of the Pulse it is a favorable Prognosis. If they do not we should not repeat their Application. We may also form some Judgment from the Appearance of the Serum for when it is yellow, green & fatid it is a Sign the Disease is of a Malignant Nature. when it is thick and like a Jelly it is a Sign the Blood is very. when the blistered part remains pale & white it is a Sign of Debility and we should then administer Wine plentifully. Blisters on the Back are most difficult to heal as it is most troublesome to apply the proper Bandages to them

and the Patient is liable to take Cold - A Blister to the Hand is the least painful. In general we apply them to the Inside of the Legs or Thighs or in Pleurisies & Peripneumonies to the Side. We generally suffer them to lay on 6 Hours except the Person is of a very delicate Habit. When applied to the Legs they may lay on 24 Hours - when to the Head they may be suffered to lay on 48 Hours or even three Days. A Strangury is apt to be excited by a Blister applied to the Head newly shaved; it should therefore be applied until 10 - 12 or even 18 Hours after this has been performed. We should be cautious how we apply Blisters to the Head when it is covered with red Pimples. Before the Application of the Blister we should cover the Pimples with adhesive Plaister. Blisters applied to the Legs or Back seldom excite a Strangury. To prevent a Strangury we should order our Patient to drink plentifully of an Emulsion of Gum Arabic in Barley, Milk & Water or other diluent Drinks. Camphor has been supposed to be a Corrector of Cantharides both when internally taken & externally applied; but to me it appear to be of no use. In delicate Women, Children & other irritable Habits we should apply a Piece of Lawn or Muslin between the Epispastic & Skin. This will also be proper when we blister the Head as by these Means we can bring off every Particle of the Cantharides. We seldom use Lawn when we apply Blisters to the Legs or Thighs except when there is a Delirium. Epispastics will raise Blisters even altho an oiled Paper be interposed between them & the Skin & even this will not always

prevent a Strangury - In the Angina Blisters applied externally to the Throat & as near as Lofible to the swelled Part seare ever fail of affording Relief. In the Angina Inflamatoria Bluding & Evacuations should attend their Use with cooling Laxatives & Glysters. Fomentations and Poultices as for Instance of Bread & Milk may be applied externally - Goosegrease also rubbed externally has been found useful. This Disorder often requires a speedy Remedy for if the Swelling & Inflamation reach the Trachea it may soon suffocate the Patient. The Bastard Angina is seldom attended with Danger - The same Remedies as indicated in this Species & Gargles may be used with Advantage - They may be composed of Common Herb Tea sweetned with Honey or Sugar or what will have a better Effect we may use Fumigations of Vinegar & Water. In a Relaxation of the Uvula we may use Gargles composed of a Tincture of Roses, Catechu Granat: or a Solution of Alum will afford Relief -

In the Angina Gangrenosa we should apply Blisters externally to the Throat. By the Irritation they produce they invite the Humors from the internal to the external Part. Bur Evacuations by Bluding and Purging are improper. We should administer Cordial, Antiseptic Medicines & Drinks such as Wine Whey & the other Preparations of Wine which generally act as Diaphoretics. The Infusion of Bark the Acid of Vitriol much diluted, Lemon Juice sweetned are proper as Gargles.

Blisters are of Service in the Tooth Ach especially

especially when it is of the Rheumatic kind. Here the Epispastics may be applied behind the Ears. If the Patient is Plethoric or if it is a pregnant Woman Bleeding is proper. If it is periodical returns at a certain Hour of the Day, resembling in this an Intermittent the Bark is of Service. When the Tooth is carious & is not relieved by the Oil of Cloves it should be taken out. It is also necessary to extract the Tooth when the Membrane or Nerve is inflamed or tends to Suppuration which may be known by the Fever Violence & Duration of the Pain & Pulsation of the Artery at the Root of the Tooth. If the Tooth is not extracted there will be a fistulous Sore under the Chin with Pains in the Gums Ears, Fauces & Head. —

In all Eruptive Fevers where the Eruption is suddenly disappears Blisters are useful. Where the Discharge from a Sore or Ulcer is suddenly checked nothing affords Relief so quickly as Epispastics applied to the Part before affected. Nothing affords Relief so soon when Rheumatic Pains fly from the Limbs & Back to the Viscera than Blisters applied to the Place that the Pain before occupied. In violent Colics the Pain may be relieved by Bleeding, Fomentations Glysters & the Application of a Blister to the Abdomen. In Affections of the Eyes or Ears Blisters seldom fail applied near the Part. In the Sciatica Blisters are of singular Service. Here by the Application of Ointments & Spirituous Substances the Disorder is sometimes relieved but the Pain is thrown upon the Viscera & Bowels. Here a large Blister should be applied to the Part first affected & repeated 3 or 4 Times so that it should keep open. Blisters are the most Natural Remedy in a Retrogression of the Goat. If the

Patient is vigorous & plethoric & the Pulse full & strong we should first take away some Blood & then ably a Blister to the Ancle. When the Part begins to inflame we should order him a Glass of generous Wine or a Bolus of Vol: Alkali from 10 to 15 Grains. This determines the Gout to the Feet or such a Derivation of the Humors to the Part as prevents worse Consequences. In Persons subject to the Gout we must attend to the Time of the Year in which they are commonly attacked with the Disorder for if at that Period they are seized with a Pleurisy or Peripneumony, Lethargy or Apoplexy we may impute it to the Gout endeavour to derive it to the Extremities; for if this is not done the common Remedies are of little Service. But if the Gout fixes in the Arm Shoulder or Back it is attended with little Danger & may be relieved by laying a Blister on the Part affected. When the Lungs are loaded with Mucus Blisters afford Relief. Blisters applied to the Sternum will afford Relief & be of Service in the Pituitous Asthma & Catarrhus Senilis. They are also of Service in the Colica Pictonum. They often afford Relief in Colics of the Nervous & Spasmodic Kind —

Blisters are of Use in Spasms in general. They seldom fail of giving Relief in Hemorrhages of the Uterus & Vomiting of Blood. They excite an Irritation in the Part to which they are applied, derive the Blood thither & thus take off the Determination to the internal Part. In Paralytic Affections they are useful from their Stimulus by which they occasion an Afflux of Humors into the Part. As Suppressions of Urine & an

Incapacity of retaining are ~~xxx~~ frequently owing to the same Cause. When there is a Paralysis of the Bladder it is insensible to the Action of Stimuli hence a Suppression of Urine takes Place. When the Neck of the Bladder labours under a Paralysis it will not contract hence a constant Stillicidium or Dribbling of Urine will take Place And as they are both owing to the same Cause so they may be both cured by a large Blister to the Sacrum or Perinæum. Children frequently grown Persons are afflicted with a Palsy of the Bladder & Incapacity of retaining their Urine from some Injury done to this Organ or from some Venereal Infection setting there Blisters to the Perinæum is the Remedy in both Cases.

Blisters are likewise of Service in the Apoplexy. This is of two Species - Sanguineous & Serous. In the Serous the Lips are pale, the Pulse small & low & the Extremeties cold. In the Sanguineous the Reverse takes Place - In both the Patient falls down suddenly, the Pulse & Breathing only remain he being deprived of both Sense & Motion. Some are taken with Vomiting. Tho' the Attack is sudden it may sometimes be foretold for several Weeks beforehand by the following Signs - A Heaviness of the Head - a Decay of Strength, the Tongue loses its Volubility, there is an Impediment in the Speech, the Voice falters, the Memory fails the Countenance changes there is a Giddiness & Pain in the Head. In the Sanguineous Apoplexy all Stimulants are improper - our Aim must be to diminish the Quantity of Blood in the Brain. If an Effusion has already taken Place our Intention

must be to increase the Absorption to diminish the
Quantity of Blood in the Head or to increase the Absorption
we must ordenlage Bleding by the Jugular Vein
or Temporal Artery which must be repeated till
the Pulse sinks, Respiration becomes easier, the Face
pale & the Swelling of the Neck subsides. We may apply
cupping Glasses or Leaches behind the Ears. If the Person
has been subject to the Piles & they are suppressed we
may apply Leaches to the Hemorrhoidal Vessels & should
order Glysters of Water Oil Sugar & Salt & as soon as the
Patient can swallow, Laxative Medicines. The Head
should lay high & the Feet should be in a depending
Situation so as to cause a Swelling of the Legs. All
Tightness from Collar, Cloths or Garters should be removed
the Windows should be throwd open. Expedition is neces-
sary & we should adhere the Strength of the Patient as
soon as posible & keep it rather below Par. After the
Paroxysm has gone off a Fever generally follows which
is to be moderated by keeping the Bowels open & the
Body cool & upon the least appearance of any Return
of the Disorder we must have Recourse to Bleding &
Laxatives. The Patient must be very sparing in his
Diet, should use no hot spicy Food Spirits Wine or bitters
he should live cheifly on Vegetables & should frequently
take small Doses of Cream: Tart: He should use moderate
Exercise but not in boisterous or bad Weather. He should
never in Summer sine expose himself to the Rays of
the Sun but should always use an Umbrella, should
avoid Smoke should never sleep directly after Dinner

should keep his Head cool nor never speaks long at a Time
nor loud; he must not attempt to lift a great Weight
nor stoop often. As soon as a Redness appears in his Face
or his Neck Cloths begin to fret tight he should lose some
Blood take some gentle Laxative If he is subject to
the Piles & they are suppressed he must not take Aloetics to
recall them but may apply Leeches to the Hemorrhoidal
Vessels. In the Serous the Head should be laid high & the
Person placed as in the Sanguineous - We may order
Bleeding as a temporary Relief - Sugar moistened with
Laurd: Comp: may be put under the Tongue - Stimu-
lating Glysters of Salt may be administered - Blisters
may be applied to the Back & Legs. The Fever that
occurs after the Paroxysm is to be treated in the same
Manner as in the former Case & the same Regimen
may be observed to prevent its Return. We may ex-
hibit some Drops of a Vol: St. to raise the Spirits &
increase Absorption -

We are next to treat of

Anthelmentics.

These are such Medicines as destroy Worms in
the Human Body. Tho' Worms are no Disease themselves
yet they are the Cause of many & various Diseases in
the System. They are always an Object deserving Atten-
tion as they not only increase & multiply but share
the Aliment introduced into the Body & thus deprive
it of its usual & proper Nourishment. The

The Manner in which Worms are generated in the Body has afforded Matter for various Speculations & Disputes. It is a common & vulgar Opinion that Worms & other Insects are generated by Putridity & Filth. They hold the same Opinion with Regard to the Generation of Worms within the Body But found Philosophy rejects this Idea. Even the most insignificant Insect was formed by the same Laws of Nature with the Whale or the Elephant. It is probable that we take in their Eggs with our Drinks & Aliment & that under this Opinion the more certain is that the same Species of Worm is found in Fish & in some Water as is found in the human Body. It is a well established fact that boiling Water does not always kill Worms or their Eggs it is therefore no Wonder that Complaints arising from Worms are so common since we may every Day take in the Eggs of Worms many Thousands in a single Glass of Water. It may perhaps be inquired what is the Reason that every Person is not subject to them. This is owing to the different Habits Strength & Constitutions of People. Persons of weak & relaxed Habits are apt to be afflicted with Worms while those of a robust Constitution & good Digestion are seldom troubled with them. Women & weakly Children with Persons who lead a sedentary Life are most liable to Worms.

The human Species are particularly subject to four different Kinds of Worms —

1st The Ascarides which are small white & pointed at both Ends like the Maggots in Cheese. They

They are chiefly seated in the Rectum – they are quick in their Motion & occasion an Itching in the Anus —

2ª The Lumbrici are round & resemble the common Earth Worm in Make & Shape but are almost white – they are generally 4 or 5 Inches long & they occur in considerable Numbers –

3ª The Tenia or Tape Worm so called from their being flat & resembling Tape. These are of great Length & consist of a Number of Articulations. When these Articulations are separated they are called Vermes Cucurbitini or Gourd Worms. Each Articulation has Life & the Power of procreating. It is scarce credible to what Lengths these Worms will grow & extend themselves – Instances have been recorded where they were near 100 Yards long – they are in common from 10 to 100 Feet long – As every Articulation is a perfect Worm it is extreamely difficult to expel it if of any considerable Size; for if but one Articulation remains it will grow to a great Size —

4th. The Ascarus Lumbricoides – This is the common round Worm pointed at both Ends.

Exclusively of these four Species no Doubt others occur but as these are uncommon Cases scarce ever distinguishable by Symptoms we shall not spend our Time in treating of them –

The Diseases occasioned by Worms are various and Numberless – 1st They shake the Aliment taken

taken into the Body— Hence the ravenous Appetite & Uneasiness of those afflicted with them when without Food —

2d They frequently form a Nidus which excites the Intestines in some Parts occasions Contractions in others This is the Cause of Flatulencies, Colics &c it has been known to occasion the Iliac Passion —

3d The Filth they generate putrifies in the Intestines and occasions Diarrhoas, Dysenteries & even Fevers of the Malignant Kind —

4 They penetrate thro' the Intestines into the Abdomen according to Instances given by Dr Haller —

5 By the Motion & Suction in the Bowels they produce various Disorders — they move from one Part to an other to procure Food or avoid what is hurtfull to them

They are irritated by Salt, smoked Meat, Spirituous Liquors, Aromatics, Sugar & other sweet Substances. By their Motion they irritate the inner Coat of the Stomach & Intestines & produce Spasms & Colics, Distensions of the Abdomen, Nausea, Vomiting, Gripings & Diarrhoas and at other Times Costiveness with a Number of other Complaints in the Bowels — and from the Connection & Sympathy which subsists between the different Parts & sometimes the whole Body they affect it in the most surprizing Manner — They produce thus a Suppression of Urine, Palpitation of the Heart, a Difficulty of Swallowing Loss of Sight, Singing in the Ears, an Impediment in the Voice sometimes a total Loss of it, Hiccough, Dizziness, Convulsions Epilepsy even Apoplexy —

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It is therefore said with Justice that no Disease is so extraordinary but that it may be occasioned by Worms. And indeed if a Patient is afflicted with any uncommon Disease the first Question we are to ask is whether at any Time he has been troubled with Worms —

In the next Place we are to inquire into the Symptoms in general by which we may know whether Worms are present or not & afterwards the particular Signs by which we may discover under what particular Species the Patient labours —

The Symptoms by which we judge whether Worms are present are an unhealthy or sickly Colour of the Face and Countenance, a frequent Change of Colour from pale to red, a blue Ring under the Eyes, An Itching of the Nose, frequent Headachs which come on especially after Meals, a Quantity of watery Saliva in the Mouth upon waking in the Morning, a grinding or gnashing of the Teeth during Sleep, an Inclination to lay upon the Stomach, the Patient is frequently found sitting upright in Bed during Sleep, a motion & Noise is perceived in the Mouth during Sleep, a Thirst in the Morning on waking, a noise in the Ears, sometimes an Aversion to Meat but generally a voracious Appetite; fœtid Breath, frequent Fainting, Vomiting, Dizziness, Difficulty of Breathing, Pains in the Belly; the Belly swells, there is a rumbling Noise in the Abdomen with a Suction & Motion which the Patient perceives tho' he cannot describe it; sometimes a Diarrhœa, sometimes Costiveness & tho' the Patient takes much Nourishment

he cannot thrive - and they are worse in the Morning if they have taken no Supper the Night before - They are worse about the New & Wane of the Moon; They are often sensible of an Irritation in the Rectum which frequently occasions Faintings. They are often troubled with a Tenesmus - they are incapable of attending to Business tho' they are at a Loss to tell what ails them At Times they cannot speak plain, some become Delirious, some are affected with Convulsions without any apparent Cause tho' they are but slight - there is no Appearance of Froth in the Mouth - Some become rigid without Sensation or Motion - they fall into a Sleep & wake perfectly sensible & complain of Nothing but Weakness - They recover slowly from any Disease & they are frequently troubled with Palpitations of the Heart. It is not however to be supposed that all these Symptoms occur in the same Person - It is sufficient to denote the Presence of Worms if some or many of these Symptoms occur in the same Person. I was therefore right in my Judgment when I concluded that a Girl 10 Years of Age had Worms because she eat a great Deal & still continued lean and was worse about the Wane of the Moon. Another Child wasted away without any apparent Cause & did not complain of any thing in particular and had no other Symptoms of Worms than that it was always found laying upon its Belly or Stomach in the Morning which is the most certain Sign of the Presence of Worms. By a few Doses of Calomel a Small

Tape Worm came away. After we are once sure that Worms are present we ought next to inquire with what particular Species the Patient is afflicted. —

The Tape Worm occasions a Suction in the Abdomen & the Patient perceives as if something alive within him was rolling along & frequently void by Stool Semen Cucurbitinæ —

The Presence of the Round Worm is known by a Pain & Griping in the Umbilical Region —

The Ascarides occasion an Irritation in the Rectum & a Tenesmus. ——

Worms

Lecture 35th.

Having thus enumerated the different Species of Worms & the Symptoms by which they may be distinguished from each other we are next to say something on the Remedies that expell or destroy them. They are termed Anthelmintics which are of two Kinds—

1st Such as by their immediate action upon Worms destroy them as in the manner of Poisons—

2d Such as act mediately that is by rendering the Plan of Abode so disagreable as to induce them to quit it. —

Under the first Head we rank Bitters such as Rue. Wormwood & Worm seed. They are not so effectual as has been supposed & seldom expel Worms unless combined with Mercury or some more powerful Vermifuge. Bitters may however sometimes be of Service without Addition. I formerly told you that a Weakness of the Intestines predisposed to Worms Bitters by restoring Tone & increasing the Peristaltic Motion may in some Cases expel them. Bitters should be always given after Worms are expelled to prevent their Regeneration. Purgatives may also be employed to expel Worms. They act in a double Intention 1st By giving a Stimulus to the Intestines they occasion a griping & Pain by which the Worms may be carried out of the Body 2d By taking away the Nourishment from the Worms they weaken them so that they cannot keep their Hold & are carried off—

It

It is better to Administer Purges after some Medicine has been given to destroy Worms but should in this Case employ those of the acrid stimulating Kind. Jalap Scammony Calomel — Aloes Rhubarb & Senna are not Adequate to the Purpose. This proves that Bitters have no immediate Effects on Worms —

We shall next consider such Medicines as seem to have a peculiar Virtue in destroying Worms. These are divided into Mineral & Vegetable — And first of the

Mineral. The weakest of these are the Saline Substances — These are divided into Acids, Alkalis, & Neutral Salts. These do not kill Worm quickly unless applied in a concentrated State which is hardly possible if given by the Mouth. They are so diluted in the Stomach that they retain very little of their Saline Stimulus when they arrive at the Place of the Worms. I have frequently however relieved Children afflicted with Worms by the use of a Domestic Medicine, which is Common Salt a Teaspoonful mixed with Molasses & have often found it as effectual as any other Mode, given every Morning & or oftener according to its Effect —

Sulphur especially joined with some Saline Substance as in Hepar Sulph: will destroy Worms. There are some Mineral Waters which contain Hepar Sulph: which are effectual in destroying Worms, such as those of Harrowgate in Yorkshire. Sulphur is an Anthelmintic even without being mixed with Salts &

and is used in this Intention mixed with Molasses & Milk as a Domestic Medicine & you will frequently find it effectual. Gun Powder is a common Medicine against Worms amongst poor People - its Virtues depend on the Sulpher & Nitre it contains -

Ever since Mercury has been introduced into Medicine it has been looked upon as powerful in Destroying Worms. It may be used in various Forms but Sulphur destroys its Effects. The principal Preparations are Calomel & Corrosive Sublimate & few are more effectual in destroying Worms. Calomel may either be given by itself or combined with other Substances as Purgative Medicines. Corrosive Sublimate in Pills with Opium in the Dose of 1/3 or 1/4 of a Grain is one of the most powerful Vermifuges but is not to be trifled - It is improper for Children. Calomel may be given in Doses from 3 to 5 Grains repeated every Second or third Day.

Tin has been recommended as a Vermifuge but always in Powder. It is imagined by every Physician almost that it acts mechanically by its Weight pricking & irritating the Worms. But it does not act altogether in this way. Tin is dissolved by the Acid in the Stomach & acts on the Worms as a Poison. From Margraafs Experiments it appears that all Tin contains Arsenic & it is probable that from this circumstance it may have some Effect in destroying Worms

Iron & the various Preparations of it-have been recommended against Worms & it has this advantage over other Remedies that it arrives at the Intestines unchanged. Boerhaave dissolved ℥j of Copperas in ℔j of Water & gave this Quantity
This Medicine at the same time gives a proper tone to the Stomach & Intestines. In my own Practice I trust chiefly to the Preparations of Iron & am very seldom disappointed. You may mix the Salt Martis with Prepared Steel & you will find it an effectual Remedy by continuing it a sufficient length of Time.

A great Variety of Vegetables kill Worms out of the Body. All Salad Plants & all such as are accompanied with an Alliaceous Smell destroy Worms. It is said that Garlic applied externally as to the Soles of the Feet will expel Worms. Asafetida is frequently used with Success. A Clove of Garlic warmed in Ashes may be swallowed whole every Morning fasting —

Carolina Pink Root, Bear Foot & Spigelia Anthelmia are all powerful Vermifuges. Dr. Lining of C. T. South Carolina was I believe the first that introduced Pink Root into Practice. I have seen it often tried & it was generally successful as almost any other Remedy. If given in too large a Dose it occasions Vertigo. It may be given either in Powder or Infusion. It has scarcely any Taste & by adding

Milk & Sugar to it Children may be so deceived as to drink it for Tea. The Dose in Substance is 9ss ad ij —

Bears Foot is a Plant that grows naturely in Maryland Virginia & the other Southern States & is cultivated in Gardens about this City. This is perhaps one of the most powerful Vermifuges. Dr Wistar of Germantown was the first that used it near this City and its Effects rendered his Powder celebrated. And is very powerful it should be used in small Doses as 2 or 3 grains in a Dose for a Child 2 or 3 Years old —

Spigelia Anthelmia grows in the West Indies. We were first made acquainted with its Virtues by Dr Brown in his Natural History of Jamaica. He tells us that this Medicine has been in use a long Time — that among the Negroes & Indians it is called Wormgrass — He says that it is as effectual against Worms as the Bark is against Intermittents. They boil two Handsful of the fresh Herb in a Quart of Water until one Half is consumed. They give 1/4 of the Quart at once to a grown Person. It is best to give Half this Quantity & repeat every 4 or 6 Hours. If the Person is a Child the Dose should be still less & the Interval longer as 12 Hours. It procures Sleep with as much Certainty as Opium & when they awake the Eyes appear distended sparkling or shining. Soon after the first Dose the Pulse becomes regular, the Convulsions if there are any are removed & the Worms

Worms come away in large Quantities sometimes without any Purgative being Administered. It is very seldom that more than one Dose is required. Dr Brown says he has often succeeded with it when there was scarce Reason to believe that the Patient could be saved by any other Means —

A Decoction of the unripe Shells of our common Walnut are said to prove Vermifuge. I have had no Opportunity of trying of them but I have Reason to believe that they will have this Effect as they kill Worms out of the Body —

Cow-Itch grows in Pods in the Form of small setaceous Points. Its Operation on the Worms is mechanical. By its sharp Points it irritates the Worms & thus makes their Habitation uncomfortable to them. It is commonly Administered in Substance in Syrup or Molasses. Horse Hairs cut fine act upon the same Principles & may be Administered with equal Success.

The Bark of the Cabbage Tree in the West Indies is looked upon to be a very powerful Vermifuge. It is as powerful as most others —

Oil of Olives or Expressed Oils have been recommended to kill Worms. It has been thought to act by stopping up the Foramina thro' which they were supposed to breath like Insects, but this is not ascertained & on the contrary the live in Water & die in Air — like

We shall next treat of the Method of cure that the particular Species require.

The Ascarides as I have already said chiefly infest the Rectum. Saline & all sweet Substances kill Worms effectually, Glisters therefore of Milk, Salt & Sugar will often destroy Ascarides without any other Medicine. Gentle Cathartics will also destroy them. Nothing is more effectual than Glisters of Quicksilver killed as it is called with Hogslard.

The Lumbrici or Round Worms are not so easily expelled as the former. The Medicine for expelling these Worms should be given about Breakfast Time & if it is given in Milk the Worms will be more ready for it. The Patient should not prepare the Potion himself. This is the Opinion of some Physicians, but I am not sure it is well founded however it is better to attend to it. If the Patient soon after taking the Medicine is sensible of great Pain, it is probable that the Worms are endeavoring to penetrate thro, the Intestines into the Abdomen and the best application is to rub the Belly with Petroleum. It is necessary that the Patient should abstain from a Milk Diet & live upon salted Meat some Time before taking these Medicines. He may also take a Piece of salted Herring at Night going to Bed without taking any Thing after it. As they do not like this Kind of Food they may be disslodged with more Ease than if this Method is not pursued. When there is Reason to believe to all the Worms have been expelled, Bitters may be given as Tonics to prevent their Regeneration. The Tincture of Rhubarb is better

than any other than any other Remedy. When Worms are attended with Fever we must use such Remedies as will destroy the Worms & will at the same Time moderate the Fever, such as Camphor & Vinegar. We may take ℥ j Camphor reduced into a fine Powder by Means of Gt. Gum: Sugar ℥ ij & good Wine Vinegar ℥ viij or ℥ x & give one or two Tablespoonfuls every 2 or 3 Hours -

The Tenia or Tape Worm is expelled with more Difficulty than any other as it is of great Length & has the Power of fastning itself on the Intestines by Means of its sucking Tubes & will sometimes elude the Powers of Medicine. D^r^ Rosen a celebrated Physician in Sweden ordered his Patients afflicted with this Worm to live for some Weeks or rather Meat before he administered any Medicines to expell it. he then prescribed some One of the Medicines which I have already mentioned and when he thought that the Worm had gotten lower down in the Abdomen he administered a smart Purge of Jallap & Calomel & ordered his Patient to drink plentifully of Cold Water. You are to observe that Cold Water will deprive this Worm of all Sense & Power of Motion. I have known this Method succeed Several Times & have seen a Tape Worm between 30 and 34 Feet long brought away in this Manner. D^r^ Hasselquist in his Travels to the East tells us

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that the Inhabitants of Grand Cairo are very much
afflicted with the Tapeworm & that to expell it they
take Petroleum dit the Worm does not come away
by the first Dose they repeat it & are seldom disap-
pointed in their Hopes of a cure. In my own
Practice in every Species of Worm, except the Ascar-
rides, I seldom use any other Medicine than the
Chalyb: Ppt. with Sal Martis & Dose the Chalybes in
much larger Doses than it is commonly employed.
I frequently exhibit it to grown People in the
Dose of ℥ss or ℥j twice a Day & gr. iv. or gr. v. of Sal
Martis may be combined with each Dose —

Antizeumica or Antiseptica. There are few or none of the Substance comprehended under this Title but we have already treated of previous to this; We shall therefore premise somewhat on the Generation of Putrid Diseases —

All Putrid Acute Diseases so much resemble one and other & require so similar Method of Treatment that what is said of one applies to all the others making Allowance for the Difference of Parts which they occupy, for the Variety of Constitutions & circumstanes of Life. There is a great Variety of Putrid Diseases, a bare Enumeration of their Names will be sufficient. The Febris Putrida Biliosa, Synochus Putrida, Tritaophia, Hematritea, Amphemerina, Leipyria, Febris Syncopalis, Elodes Dysenteria, Eliola, Stroder, Typhus, Febris Maligna & Petechialis and the Angina Gangrenosa. They are all owing to a similar cause. The same Cause that in one Person occasions a Bilious Putrid Fever will in another produce a Sore Throat & in a third a Dysentery. In all these Cases both Fluids & Solids are affected & have a Tendency towards Putrefaction. We shall first enumerate the Occasional Causes & from them deduce the Proximate Causes. —

We before observed that the Fluids of our Body have a constant & natural Tendency towards Putrefaction which is prevented from going to Excess by the Aliment we take in. If a Person is deprived of all Nourishment he will die of a Putrid Disorder. This we see in the Cities & Fortresses where the Inhabitants are besieged & want the Necessaries of Life the Plague or some other Putrid Disorder is the Consequence. This ceases when the

Seige is raised & the Inhabitants are supplied with fresh Food.
Persons who live on Animal Food are very subject to Putrid
Disorders. This illustrated by an Account of the Plague in
Turkey which is related in the Philosophical Transactions
where it is observed that the Armenians are least of all
subject to this Disorder. This People eat little Meat, they
make great Use of Onions Leeks & Garlic & never Drink Wine.
That the Humors are more or less putrescent according
to the Aliment taken in is proved from the Experiments
which Dr Young made upon the Milk of a Bitch. When
he fed her on ~~Milk~~ Meat her Milk was alkalescent
when he left this off a few Days & fed her on Vegetables
her Milk was acescent.

Impure & corrupt Food is another Occasional
Cause. Vandermeir tells us that during the Seige of Buda
the Inhabitants were necessitated to live upon very
impure & bad Food the Consequence of which was that they
were seized with a Plague while the Besiegers who had
Plenty of wholesome Food continued intirely free from
the Disease. Persons of a strong Habit in whom the
Functions are performed with Vigour are more liable
to those Diseases ~~that~~ than Persons of a weak & lax Habits
of Body. It is an undoubted Fact that if a young
healthy & strong Person goes from North America to
the West Indies with his Blood dense & rich & his Fibres
highly braced he will be more liable to the Yellow Fever
prevalent in those Parts than one of a weak & relaxed
Habit. Violent Exercise, hot spicy Food, stimulating Medi-
cines Rum & Spirits all tend to produce these Diseases —

not because they are Septic, for Experience demonstrates that they oppose Putrifaction, but because they stimulate the Solids & increase the Irritation of the Fluids. Heat along Exposure to the Rays of the Sun tend to produce these Diseases. All these operate as Remote Causes & eventually dispose to these Diseases. But there is something more necessary to act as an Exciting Cause of the Disease for if the Secretions and Excretions are Kept up the Person remains in tolerable Health but as soon as the Perspiration is checked or suppressed a Putrid Disease comes on. It therefore happens that whatever checks the Perspiration is the Exciting Cause of the Disease. When Persons in a warm Bed are exposed to Cold they will suffer from the Perspiration being suddenly checked while the Body is heated. Dews after a hot Day will also checks the Perspiration. For this Reason the Autumn teems with Diseases, particularly to those who in the Morning chill, cloth themselves for the hot Sun of Noon. Particular Affections of the Mind as Grief & Sadness tend to check Perspiration Hence Dr. Lind tells us that Fear alone would produce a malignant Disorder. long continued Watchings also have this Effect. But all these are nothing in comparison with a warm moist Air abounding with putrid Exhalations. A warm moist Air without putrid Exhalations will produce Intermittents & other Disorders not of the Putrid Kind. This is very prettily illustrated by Pringle. He tells us that the English Soldiers encamped in Zealand exposed to noxious Vapours from Lakes were very sickly while the Sailors on Board the Vessels at Anchor at a Distance from Shore out of the Reach of the noxious

noxious Vapours continued perfectly healthy. Dr Lind gives similar Instances in his Papers on Fevers & Infection Lancisius tells us that that Part of Rome which is exposed to the Southerly Wind blowing over Ponds & Morasses is subject to Putrid Disorders from which the other Part remains perfectly free. This is so well known that no Person travelling to or from Rome on that Side of it will shut within 20 Miles of it. It is said that the late Lord Baltimore neglected this Caution & in Consequence of it was seized with a putrid Fever of which he died. Dr Lind tells us that Sailors are healthier at Sea than in Harbors It is said that the higher the Ships advance up the Rivers on the Coasts of Africa the more sickly the Sailors become while those out at Sea or in the Mouths of large Rivers are perfectly healthy. From hence it appears that it is not Heat and Moisture alone but it is necessary that Putrid Exhalations be combined in order to produce Putrid Disorders This is confirmed by the Observations of Physicians in all Ages. even Galen observed that moist Air filled with Exhalations from Marshes produces Putrid Disorders. The Bodies of Men slain in Battle remaining unburied and the Carcases of Fish & Animals thrown upon & rotting on the Sea Shore, The Narrowness & Filth of Streets, putrifying Vegetables, damaged Corn, People crowded & confined in Ships & Jails have all been the occasion of Putrid Disorders. Livy illustrates this. He tells us that a City in France was surrounded with a Ditch & the Inhabitants remained healthy. by some means the Water in the Ditch failed & from the Filth laying in the

laying the Bottom stinking Vapours were emitted. These soon produced a Putrid Disorder which destroyed a great Number of the Inhabitants, but upon again filling the Ditch with Water the Disease Vanished intirely — Hazelquist tells us that during the Overflowing of the Nile the Inhabitants enjoyed perfect Health but when the Waters subside the whole Country appears like one Morass filled with putrid animal & vegetable Substances. From this the Air is soon replenished with putrid & noxious Exhalations producing the Dysentery & other Putrid Disorders. You are to observe that while the Water is at a certain Height above the Earth no Putrifaction can go on but when it subsides to a Level with the Surface of the Earth putrid Exhalations arise. Philadelphia is in a Manner surrounded with Water & affords us as good an Instance as occurs in any Part of the World & it is notwithstanding very healthy. But a few Miles below the City this is not the Case tho' even here the Inhabitants are tolerably healthy till Autumn when the Water in the Ditches & Ponds is evaporated, then putrid stinking Exhalations arise from the Substances at the Bottom of these occasioning Fluxes & other Disorders of which the Inhabitants of the City have little or no Knowledge. It is a Fact that the People below the City remain tolerably healthy during the Spring Winter & greatest Part of the Summer until the Water is evaporated from the Ditches & Ponds. The same I am told is the Case in the States to the Southward of this. From this it appears that it is not Humidity & Heat but putrid Exhalations which excite putrid Disorders. This shows in what the Proximate Cause consists viz.

viz.t A Putrid Ferment taken into the Blood or generated in the Body producing a change in the Fluids & Solids & converting them into its own Nature. This is the Opinion of Pringle, Huxham & every rational Writer since the Time of Hippocrates. all the secreted Fluids are of a putrid Nature & from all the Symptoms & Phanomena it appears that the Blood also is affected. The Blood breaks out in various Parts & is discharged from the Nose, Angles of the Eyes &c. When taken from a Vein it does not coagulate but appears thin and dissolved; livid Purple Spots appear over the whole Frame and at the Close of the Scene the Body appears all over a putrid Carcase —

There has been a Dispute with respect to Putrid Fevers whether they are always Contagious or not. I think we may answer in the Negative & suppose they are only Contagious when a Person has been exposed to the same occasional Causes. This is only Matter of Opinion, fortunately for us this Clime does not often afford an Opportunity to make Observations on this Matter & besides the Dispute is of such a Nature that any Person may satisfy himself by consulting Books. There are Instances of Diseases in which the Fluids were converted into a Putrid State and yet these Diseases were not Contagious. The following illustrates this. In the Year 1763 an uncommon Disease appeared in the Island of Antigua which attacked only the Negroes & Cattle. At first destroying Oxen Stock & Hogs it at length attacked the Negroes who perished by it in great Numbers. The white People remaining free except the Person who gives us this Account. This

This Gentleman was a Practitioner of Physic & he probably received this Disease from opening a Sheep that died with it. This Disease was evidently of a Putrid Nature. It appeard with Boils & Bubos. It attackedonly those Negroes who eat the Cattle that died of this Diforder. Here we have an Instance where eating putrid Meat communicated the Diforder to the Person who eat it & also shows that Contagion may act on the Fluids as well as the Solids & here the Fluids appear to have been primarily affected ——

As all Putrid Diseases are of a similar Nature & Origin they require nearly the same method of Treatment. We should first by gentle Evacuants cleanse the Stomach and Bowels & then administer such Medicines as resist the putrefactive Tendency & lastly restore & support the Strength of the System. Bleeding will do little or nothing towards a Cure except where the Patient is very vigorous. When the Pulse is not hard tense or when there is not an Inflammatory State of the System in the Beginning, the best Practitioners agree that large & repeated Bleedings by weakening the System will contribute to increase the Diforder & if it is ever proper it must be with the utmost Caution & Circumspection. Many Physicians give Emetics in Putrid Diforders. Dr. Hillary observes that he seldom had occasion to administer Emetics as there is almost always a constant Nausea & Vomiting which may be sufficiently promoted by Draughts of Camomile Tea & between whiles he gave the Acid of Vitriol to correct Putrescency. Sinnes

Stimulating Purges are improper - the Bowels are kept open by an Infusion of Tamarinds or Prunes, by cooling acidulated & refrigerating Drinks - the Patient should eat plentifully of ripe Fruits, drink Sherbit or any other agreeably acidulated Drinks. After the Stomach is thus cleansed if a Nausea Oppression & Anxiety remain they may be relieved by taking an Infusion of Mint in Claret at the same Time continuing the Use of the Elixir of Vitriol. We must always also keep the Bowels open by lenient Glysters. we should by all Means guard against a Diarrhea; if this comes we should immediately check it by stewed Claret & Cinnamon or by an Infusion of roasted Oranges in Claret diluted with Water. If these fail we are to make Use of an Infusion of the Bark to which may be added some Tinctura Japonica & Laudanum.

There has been a Dispute whether Blisters are proper in Putrid Disorders. Some are of Opinion that they are of no Use while others place great Confidence in them. When the Disease is confined to a particular Part & are entirely local Blisters may be of Advantage. Thus in the Angina Gangrenosa Blisters applied to the Ancles will often produce great Effects by the Irritation which they occasion. They derive the Fluids to the external Parts & thus relieve the internal. They have been thought proper when the Strength of the Patient sinks & a Stimulus becomes necessary but I entertain great Doubts of their Use

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In one Case they seemed to accelerate the Health of the Patient.

To fulfill the Second Indication which is to resist Putrefaction we should persist in the use of the Drinks and Medicines first mentioned. The Patient should take large Doses of the Elixir of Vitriol & of the various vinous or watery Infusions of the Barks if the Bark cannot be given in Substance on occasions Purgeing— It should therefore be given in Decoction especially with Wine. We should not limit the Quantity but the Patient should take as much as he possibly can Wine Whey is of great Importance— it excites a Diarrhea and removes the Putrefaction. If a Delirium takes Place the Head should be shaved & washed with Vinegar and Water— This should also be applied to the Hands Arms & Breasts Neck & Feet. Pediluvia have saved many a Life. Dr Cullen says that he saved more Lives by Fomentations than by any other Means.

In the Putrid Sore Throat Dr Fothergill recommends a Gargle of Barley Water with the Addition of Honey and Tinct: Myrrh which were directed to be injected into the Throat by Syringes. Dr Pringle speaking of the Use of Gargles tells us that he lays the steif Strings upon them & then forces five or six Syringes full to be injected into the Throat as far as the Patient can bear it & this is to be repeated 3 times a Day. The Fumes of strong Vinegar & Spirit should be received into the Mouth & Throat &

and before the Patient swallows any thing he should wash his Mouth & Throat & gargle with something of this kind. In Putrid Fevers the Patient has a desire for cold Drinks & there is no Reason to deny him this gratification. Cold Draughts will check Vomiting, refresh the Patient & act as Tonics. The Patient has a constant aversion from Food we ought not however on this account refrain from giving proper Nourishment to support & repair Strength. We may give him Sago, Panada & Gruel & whist Putrefaction. He should eat plentifully of ripe Fruits, but above all a constant Succession of fresh Air is absolutely necessary. No one can exist without it. However a Putrid Fever may rage during hot Weather it will be relieved when the cold Weather comes on. Dr Cullen also observed that a rich Person should be kept in a spacious Apartment. The Linnen & Bed Cloths should be frequently changed & aired. When the Patient is recovering we should guard against a Relapse. This is to be done by giving the Vitriolic Acid, Bark, & by regulating the Diet. The Patient should use Wine & such Nourishment as is easy Digestion does not oppose to Putrefaction. At proper Intervals the Patient should take a gentle Dose of Rhubarb to evacuate & eliminate any Collavies that may occur - moderate Exercise should likewise be used & when the Patients Strength is pretty well restored Bathing in cold Water will be very serviceable in preserving Security against a Relapse

We are now, Gentlemen, to enter upon the Consideration of those Diseases to which Children are more particularly incident; and in Order to render the Subject more complete, I shall begin with their Management from the Birth. What I shall offer you concerning the Treatment of Children, during the first Months at least, I trust deserves your particular Attention, as it is taken in a great Measure from the extensive Practice of Doctor Young, a Gentleman of the first Respect at Edinburgh. —

No Animal comes into the World in so helpless a Condition as the Young of the human Species, Children at the Moment of their Birth undergo a great Change. They leave an Heat of 96°. & come into that of 60°. which is as great as the Difference between hard Frost & temperate Weather; no Wonder therefore that at their first Entrance

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